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# **ENGINEERING REPORT**

# FAA CONTRACT NO. DTFA03-02-C-00044 PHASE 1, CLIN 0001f (TASK 6) - PRE-TEARDOWN INSPECTION REPORT

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# LIST OF ACRONYMS

AD Airworthiness Directive

ASNT American Society for Non-destructive Testing

BS Body Station (Fuselage Aircraft Coordinate System)

CIC Corrosion Inhibiting Compound

DVI Detailed Visual Inspection

BS Fuselage Station (Aircraft Coordinate System)

ET Eddy Current Test/Inspection

FWD Forward

GVI General Visual Inspection

HFEC High Frequency Eddy Current

LFEC Low Frequency Eddy Current

MFEC Medium Frequency Eddy Current

MOI Magneto Optical Imaging

MPD Maintenance Planning Document

NDT Non-destructive Testing

SB Service Bulletin

SSID Supplementary Structural Inspection Document

TOPP Technical Operations Policies and Procedures

UT Ultrasonic Test/Inspection

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## **EXECUTIVE SUMMARY**

Various NDT and visual inspections were accomplished on panels which were removed from aircraft N474DA, a Boeing 727-232. The pre-teardown inspections were conducted after aircraft disassembly and prior to teardown and destructive testing.

During the Pre-teardown phase of inspections, 196 indications were noted at 131 fastener sites. However, this phase represents a "lab" environment with controlled conditions as opposed to the harsh desert conditions found during the "field" inspections. There were more fasteners rejected by external LFEC (19) but fewer by internal DVI (32), when compared to the Field Inspection Report (Phase 1, CLIN 0001d). As found with the field inspection, the areas which had the most fasteners affected were between BS 720B to BS 720C (14 fasteners) and BS 540 to BS 600 (36 fasteners).

Indications were found during inspections of tear-strap debonding at the circumferential butt joints at BS 360 and BS 740. These locations do not have bonded tear straps, but do contain other bonded structure. An external MFEC inspection was conducted to examine for cracking in the upper skin at every fastener, revealing three indications.

Several advanced NDT techniques were examined during the Pre-teardown inspection. These included Magneto Optical Imaging (MOI), Rivet Check, and C-scan Eddy Current.

During MOI of the panels, 22 indications were noted at 18 fasteners, all on the lower row of the longitudinal lap joints. Rivet Check detected indications at 90 fasteners on the lower row of fasteners on the longitudinal lap joints. Only 18 of these fasteners were rejectable. Rivet Check also detected indications at 37 fasteners on the upper row of fasteners on the longitudinal lap joints. Only 11 of these were considered rejectable. C-scan Eddy Current revealed 46 total indications, all but one on the lower row of fasteners on stringer 4R.

In addition to the various NDT and visual inspections conducted, fastener parameter measurements were taken of every fastener in all seven panels. These fastener parameters were fastener head diameter, countersink fit (flushness), fastener buck-tail diameter, crack length (if any) and fastener remaining grip length.

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## **CHAPTER 1. INTRODUCTION**

This report supports Task 6 of FAA Contract No. DTFA03-02-C-00044. Various NDT and visual inspections were accomplished on panels which were removed from aircraft N474DA, a Boeing 727-232. The pre-teardown inspections were conducted after aircraft disassembly and prior to teardown and destructive testing. This report provides details and results of the inspections, including procedures used, locations and documentation of defect indications noted, detailed fastener parameters, condition of the panels after aircraft disassembly, and a comparison of the Field Inspections previously accomplished.

This report and the accomplishment of procedures associated with the report, fulfill all obligations of Task 6 of FAA Contract No. DTFA03-02-C-00044. Detailed descriptions of the sections removed, including engineering drawings showing geometric dimensions, photographs taken before and after removal, exact location and orientation with respect to the aircraft, and the procedures for removal have been previously presented in the Target Area Report (CLIN 0001c) and the Removal of Specimens Report. This report, along with those previous deliverables, constitutes the deliverable Phase 1, CLIN 0001f.

# **CHAPTER 2. RESULTS AND CONCLUSIONS**

This report details procedures and results of various visual and NDT inspections conducted on panels removed from aircraft N474DA in Atlanta, Georgia. Current inspections used during this phase of the project include an external detailed visual inspection, an internal detailed visual inspection, external LFEC sliding probe, internal MFEC (lap joints), internal HFEC, external ultrasonic inspection (tear-straps), and external MFEC (every fastener). These were based on the OEM's recommended standard practice and directed inspection requirements. Advanced technologies used include Magneto Optical Imaging (MOI), Rivet Check, and C-scan Eddy Current.

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An initial walk-around inspection was conducted to catalog and document the condition of the panels upon arrival in Atlanta. The panels were unpacked and moved to a secure location which served as both a storage area and a working (i.e., lab) area.

During the Pre-teardown phase of inspections, 196 internal MFEC indications were noted at 131 fastener sites on the lower row of fasteners on the longitudinal lap joints. However, this phase represents a "lab" environment with controlled conditions as opposed to the harsh desert conditions found during the "field" inspections. There were more fasteners rejected by external LFEC (19) but fewer by internal DVI (32), when compared to the Field Inspection Report (Phase 1, CLIN 0001d). As found with the field inspection, the areas which had the most fasteners affected were between BS 720B to BS 720C (14 fasteners) and BS 540 to BS 600 (36 fasteners).

During the field inspections, conducted at Victorville, CA in November 2002 under harsh conditions, 172 internal MFEC indications on 109 fasteners were documented. External LFEC inspection only found 18 of these, while internal detailed visual inspection only noted 34 fastener locations.

Indications were found during inspections of tear-strap debonding at the circumferential butt joints at BS 360 and BS 740. These locations do not have bonded tear straps, but do contain other bonded structure. Four areas of several indications were noted along each location and indications were located in the rivet pattern.

A few instances of paint flaking and corrosion at the longitudinal lap joints were noted. Internal DVI and HFEC inspections examined for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments. Visual inspection noted several stringer clips and holes in frames which were suspected cracks. However, the areas were not verified with HFEC and are considered false calls.

An external MFEC inspection was conducted to examine for cracking in the upper skin at every fastener, particularly at all skin to stringer and skin to frame attachments. Three indications were noted during this inspection. Inspections of other areas revealed no indications.

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Several advanced NDT techniques were examined during the Pre-teardown inspection. These included Magneto Optical Imaging (MOI), Rivet Check, and C-scan Eddy Current. Most of these techniques focus on inspecting the longitudinal lap joints and will be compared to the conventional external LFEC sliding probe, internal MFEC, and internal and external detailed visual inspections.

During MOI of the panels, 22 indications were noted at 18 fasteners, all on the lower row of the longitudinal lap joints. These are shown in Table 42. Many of these areas match the areas of numerous internal MFEC indications when compared to Table 41.

Rivet Check detected indications at 90 fasteners on the lower row of fasteners on the longitudinal lap joints. Only 18 of these fasteners were rejectable. Sixteen of the 90 fasteners contained multiple crack indications. Several indications are believed to be either from the lower edge of the upper skin or oblong holes.

Rivet Check also detected indications at 37 fasteners on the upper row of fasteners on the longitudinal lap joints. Only 11 of these were considered rejectable. One of the 37 fasteners contained multiple crack indications.

C-scan Eddy Current revealed 46 total indications, all but one on the lower row of fasteners on stringer 4R. The area which had the most fasteners affected was between BS 540 to BS 600, similar to the internal MFEC results.

In addition to the various NDT and visual inspections conducted, fastener parameter measurements were taken of every fastener in all seven panels. These fastener parameters were fastener head diameter, countersink fit (flushness), fastener buck-tail diameter, and fastener remaining grip length. Each measurement type used calibrated equipment which were traceable to NIST standards (i.e., PMET items) with an accuracy of +/- 0.0001". Data from these measurements are found in the Database, with reports from the Database found in Attachments to this report. The initial database is a contract deliverable via Phase 1, CLIN 0001j. For all visual indications emanating from fasteners, the crack length, origin orientation, and angle were measured, using a 10X magnifier, flashlight and mirror.

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## CHAPTER 3. VISUAL & NDT INSPECTION PROCEDURES

## 3.1 General

Per Task 6 of FAA Contract DTFA03-02-C-00044, the pre-teardown inspections shall be based on the procedures used in Task 4 (Field Inspection) which are based on the OEM's recommended standard practice and directed inspection requirements. These include Airworthiness Directives, Service Bulletins, the B727 Supplemental Structural Inspection Document (D6-48040-1), the B727 NDT Manual (D6-48875), or the B727 Maintenance Planning Document (D6-8766). Some NDT procedures were modified to allow data acquisition of signal response data to be analyzed later.

General Visual Inspection (GVI) and Detailed Visual Inspection (DVI) guidelines are governed by the following:

General Visual Inspection (GVI): A visual examination of an interior or exterior area, installation or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors, and is typically accomplished within touching distance of the part or area. Stands, ladders, or platforms may be required to gain proximity to the area being checked. Removal of foreign material such as dirt, grease, etc., may be required to expose suspected areas. Inspection of structures may be performed without removal of Corrosion Inhibiting Compounds (CICs) and should be performed with sufficient detail to detect all defects 3" long or greater. If localized heavy buildup of CIC is encountered which prohibits complying, have CICs locally removed prior to inspection and replaced upon completion.

Detailed Visual Inspection (DVI): An intensified, critical visual inspection of an assembly, area or installation for any evidence of mechanical or structural irregularity including exposed PROPRIETARY DATA - RESTRICTED DISTRIBUTION - CONTROLLED BY TERMS OF FAA AGREEMENT

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structural components, appliances, cables, controlling devices, ducting, plumbing, wiring, etc., for condition and security or signs of leakage. Close proximity is required and stands are used. Plates, panels, fairing, etc., will be opened as specified on the applicable work document and/or, as necessary, to further investigate suspected areas based on evidence of possible failure. Inspection aids such as mirrors, magnifying glasses, dye check, etc., are employed as specified on applicable work documents or as necessary to examine a suspected area. Removal of foreign material such as dirt, grease, etc., is required on all critical areas. Inspection of structures may be performed without removal of Corrosion Inhibiting Compounds (CICs) and should be performed with sufficient detail to detect all defects 2" long or greater.

All Airworthiness Directives and Service Bulletins referenced can be found in Tables 1 and 2. Table 1 provides information on visual inspections conducted on the fuselage panels, while Table 2 provides details on the NDT inspections conducted on the fuselage panels.

## 3.1.1 Qualifications

Field inspections were performed by qualified individuals. All eddy current inspections were performed by either company Level II or company Level III personnel. Ultrasonic inspections were performed by either a company Level II inspector or the company Level III in Ultrasonics and Thermal/Infrared. Additionally this individual is ASNT (American Society of Nondestructive Testing) Level III certified in Thermal/Infrared. All of the above individuals also have A&P licenses. All visual inspections and some HFEC inspections were performed by a Senior Engineer, who is ASNT Level III certified in Ultrasonics, Eddy Current, and Liquid Penetrant, and trained in visual inspection.

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# **3.2 Fuselage Panels**

The subject aircraft was cut into sections and the remaining pieces shipped to Atlanta. During this phase of the project, seven panels were inspected after arrival in Atlanta. These panels were labeled F1, F2, FT1/F3, FT2/F4, FT3/F5, FT4/F6, and F9. All of these panels were removed from the crown of the aircraft, except panel F9, which corresponds to stringer 26L. Details of the procedures for removal of the specimens from the aircraft, and the exact location and orientation with respect to the aircraft are documented in previously deliverables, the Target Area Report (CLIN 0001c) and the Removal of Specimens Report. Figure 1 shows the location of the panels with respect to the aircraft and is reproduced in this report for reference. Details of each panel are presented in the Results and Discussion section of this report.

# 3.3 Inspections

All visual inspections conducted on the panels can be found in Table 1, while NDT inspections conducted on the panels can be found in Table 2.

Table 1. Visual inspections conducted on the panels.

Inspection Type	Description	SSI	Airworthiness Directive(s)	Service Bulletin(s)
GVI	External GVI of Fuselage			
DVI	External DVI of Long Lap Joints	F-43	91-06-06	727-53-0072
DVI	Internal DVI of Lap Joint 4L	F-43	99-04-22, 02-07-09	727-53-0222
DVI	Internal DVI of Lap Joint 4R	F-43	99-04-22, 02-07-09	727-53-0222
DVI	External DVI of Circ Butt & Long Lap Joint	F41/F43	90-26-09 01-09-12	727-53-0072, 727-53- 0084
DVI	Internal DVI of Circ Butt Joint	F-41	90-26-09 01-09-12	727-53-0084
DVI	Int. DVI-Aft Cabin (Frames)	F-33		727-53-0211
DVI	Int DVI-Fwd Cabin (Frames)	F-33, F- 29		727-53-0188
DVI	Int DVI-Fwd Cabin (skin, joints)	F-45		727-53-0041

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Table 2. NDT inspections conducted on the panels.

		2. ND1 inspections cond			
Inspection	Description	Procedure	SSI	Airworthiness	Service Bulletin(s)
Type				Directive(s)	
UT	External UT of	Part 4, 53-30-27 Figure 1		90-20-18	727-53-0082
	Tearstraps				
ET	External LFEC of	Part 6, 53-30-27 Figure 13	F-43	99-04-22, 02-07-	727-53A0222
	Lap Joint 4L			09	
ET	External LFEC of	Part 6, 53-30-27 Figure 13	F-43	99-04-22, 02-07-	727-53A0222
	Lap Joint 4R	_		09	
ET	Internal MFEC of	Part 6, 53-30-27 Figure 17	F-43	99-04-22, 02-07-	727-53A0222
	Lap Joint 4L	_		09	
ET	Internal MFEC of	Part 6, 53-30-27 Figure 17	F-43	99-04-22, 02-07-	727-53A0222
	Lap Joint 4R			09	
ET	Internal HFEC of all	Part 6, 51-00-00 Figure 23			
	stringer clips				
ET	External MFEC of	Part 6, 53-30-27 Figure 22			
	all fasteners				
MOI	External LFEC of	Part 6, 51-00-00 Figure 15	F-43	EMERGING	TECHNOLOGY
	Lap Joint 4R	, G			
MOI	External HFEC of	Part 6, 53-30-27 Figure 19	F-43	EMERGING	TECHNOLOGY
	Lap Joint 4L				
MOI	External HFEC of	Part 6, 53-30-27 Figure 19	F-43	EMERGING	TECHNOLOGY
	Lap Joint 4R	, G			
MOI	External LFEC of	Part 6, 51-00-00 Figure 15	F-43	EMERGING	TECHNOLOGY
	Lap Joint 4L	, G			
C-scan	External LFEC of		F-43	EMERGING	TECHNOLOGY
	Lap Joint 4R				
C-scan	External LFEC of		F-43	EMERGING	TECHNOLOGY
	Lap Joint 4L				
Rivet Check	External LFEC of	Part 6, 51-00-00 Figure 25	F-43	EMERGING	TECHNOLOGY
	Lap Joint 4R	, G			
Rivet Check	External LFEC of	Part 6, 51-00-00 Figure 25	F-43	EMERGING	TECHNOLOGY
	Lap Joint 4L	, G			
Rivet Check	External HFEC of	Part 6, 51-00-00 Figure 25	F-43	EMERGING	TECHNOLOGY
	Lap Joint 4R	, ,			
Rivet Check	External HFEC of	Part 6, 51-00-00 Figure 25	F-43	EMERGING	TECHNOLOGY
	Lap Joint 4L				
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# 3.3.1 Longitudinal Lap Joints

Longitudinal lap joints, B727 SSID Item F-43, were inspected with both visual and NDT inspections, see Tables 1 and 2. These received the most attention during the inspections due to their susceptibility to MSD. Additionally, several emerging technologies (discussed later) were used to examine the

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longitudinal lap joints on all panels. After cutout, the panels only contained longitudinal lap joints at stringers 4L and 4R, with the exception of panel F9 which contained stringer 26L.

# **3.3.1.1** External Detailed Visual Inspection

An external DVI of longitudinal lap joints was conducted via Airworthiness Directive 91-06-06 and Service Bulletin 727-53-0072 to examine for cracking in the upper skin, upper row of fasteners. See Figure 2 for a depiction of typical cracking of this detail. Additionally, the inspection also examines for corrosion in the joint.

# **3.3.1.2 External MFEC Inspection**

An external MFEC was performed on every fastener per B727 NDT Manual, Part 6, 53-30-27, Figure 22. The main focus was to examine for cracking in the upper row of the longitudinal lap joints (See Figure 2), but also to examine for cracking in the skin at all skin-stringer attachments and skin-frame attachments.

# **3.3.1.3** External LFEC (Sliding Probe) Inspection

External LFEC was performed on the longitudinal lap joints to examine for cracking in the lower row, lower skins using B727 NDT Manual, Part 6, 53-30-27, Figure 13. The protruding head fasteners on panel F9, located at stringer 26L between BS 500 and BS 600, were inspected with a LFEC spot probe per B727 NDT Manual, Part 6, 53-30-27, Figure 18. The inspections for the external LFEC were based on Airworthiness Directive 99-04-02, Airworthiness Directive 02-07-09, and Service Bulletin 727-53-0222.

# **3.3.1.4** Internal Detailed Visual Inspection

An internal DVI was conducted via Airworthiness Directive 99-04-02, Airworthiness Directive 02-07-09, and Service Bulletin727-53-0222. The inspection examined for cracking along the lower row of fasteners in the lower skin of the longitudinal lap joint.

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# 3.3.1.5 Internal MFEC Inspection

Internal MFEC was performed on the longitudinal lap joints to examine for cracking in the lower row of fasteners on the lower skins using B727 NDT Manual, Part 6, 53-30-27, Figure 17 (Airworthiness Directive 99-04-02, Airworthiness Directive 02-07-09, Service Bulletin727-53-0222). The inspection examined for cracking on the lower row of fasteners in the lower skin of the longitudinal lap joint.

# 3.3.1.6 Advanced Inspection Technologies

Several advanced NDT techniques are to be examined through the course of the contract (Tasks 6, 11). Most of these techniques focus on inspecting the longitudinal lap joints and are then compared to the conventional external LFEC sliding probe, internal MFEC, and internal and external detailed visual inspections. Other advanced technologies maybe used to examine the panels pending further investigation and discussion.

# 3.3.1.6.1 Rivet Check (NASA Self-Nulling Rotating Probe)

The Forester Rivet Check was used to conduct inspections on the upper and lower rows of lap joints via B727 NDT Manual, Part 6, 51-00-00, Figure 25. It is designed to find cracks in skins that extend from fastener holes below flush head rivets, without removal of the rivets.

The Rivet Check system was developed by NASA (Self-nulling probe) as a new technique to examine for interlayer and surface cracking and is compared to the LFEC Sliding Probe. The Rivet Check System is shown in Figure 3 and consists of a laptop computer and the rotating probe. The rotating probe holds the sensing element, the self-nulling probe, in addition to a drive motor for probe rotation, an angular position sensor, and associated electronics. Schematics are presented in Figures 4 and 5. The Rivet Check System software allows the user to easily center the inspection probe over the rivet head and then presents any defect signal on the laptop. The user can then adjust for both probe liftoff and rivet head radius to quickly perform the inspection.

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First layer cracks were previously detected in a study at the Aging Aircraft Nondestructive Evaluation Center (AANC), producing a 90/95 POD of 0.032" crack length in 0.040" thick aluminum skins. Second layer cracks were detected in 0.063"/0.063" thick skins with a 90/95 POD of 0.100" crack length. Some third layer cracking has also been detected. These studies used manufactured cracks or EDM notches, which are not representative of true in-service cracking. However, a similar study and comparison to LFEC is currently on-going at AANC on actual in-service cracks using lap joint specimens removed from Boeing 727 aircraft.

The rotating probe is placed over each flush fastener and then centered using the vector signal that occurs on the left side display, see Figure 6. Upon proper centering, the system takes data automatically and displays the waveform on the right side display. The right side display allows for 360 degrees to be displayed, encompassing the entire fastener. The left side signal is monitored for bulges and the right side monitored for sharp peaks. Any peak which exceeds a preset threshold is deemed rejectable. Figure 6 shows a scenario of the system detecting a 0.040" long crack at 90 degrees and a 0.050" long crack at 260 degrees.

# 3.3.1.6.2 Magneto Optical Imaging (MOI)

The Magneto Optical Imaging System was used to conduct inspections on the upper and lower rows of longitudinal lap joints via B727 NDT Manual, Part 6, 51-00-00, Figure 15, and Part 6, 53-30-27, Figure 19. It is designed to find cracks in skins that extend from fastener holes below flush head rivets, without removal of the rivets. MOI was developed as a new technique to examine for interlayer and surface cracking and corrosion and will be compared to the LFEC Sliding Probe results from the lower row of the longitudinal lap joints.

The magneto-optical imaging technique provides a spatial map of the perpendicular component of the magnetic field above the surface of a material that can be compared directly with a conventional light microscope image of the same region for structure-property relationship determinations. Magneto-optical contrast is based on the Faraday rotation of polarized light that is induced in magneto-optically active materials. A thin film of magneto-optical material placed in contact with a magnetized sample will

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respond locally to the magnetic field generated by the sample that is under study. Any non-uniform field in the sample will cause a non-uniform rotation of the polarization vector of the incident light, and therefore a contrast in the polarized light image.

Images appear directly at the sensor and can be viewed by eye, or converted to a standard television format for viewing on a monitor. At higher frequencies, MOI can image and detect surface and near-surface cracks which extend 0.060" from a fastener head and some forms of corrosion. At lower frequencies, the instrument can detect and image second and third layer cracks and some corrosion in aluminum structures, with a limit of 0.072" total thickness for the stack-up.

The system used in this study is a Model 307 from Physical Research Instruments, Inc. with a wearable video monitor. Figure 7 shows the system consisting of a control unit, hand-held imaging head and video monitor. The hand-held imaging head slides along the surface while the inspector observes the video at a maximum speed of 1" per second. The orientation of the scan is critical, with cracks aligned more than 45 degrees from the optimum sensitive axis of the MOI imaging head not reliably detected. Figure 8 shows normal and lateral scans with some representative signals typically found during scanning. Flaws will tend to be elongated from the normal fastener hole.

# 3.3.1.6.3 C-scan Eddy Current

A modified SAIC Ultra Image IV System was used to conduct LFEC inspections on the lower rows of longitudinal lap joints. No procedure exists in the NDT Manuals for this technique, although the technique has had success in several military applications. It was developed as a new technique to examine for interlayer and surface cracking as an alternate to the LFEC Sliding Probe. The same calibration standard was used for the LFEC sliding probe and the C-scan eddy current inspections. Large areas can be inspected quickly, without the need for fastener removal.

The system is an imaging unit, capable of capturing scans from either ultrasonic or eddy current methods. The data is then displayed with as a map showing both amplitude and location information. The unit consists of a track and translator, which contain suction cups to hold it in place. The suction cups attach to a vacuum pump and a motion controller connects to the track/translator. A SPO 3806 PROPRIETARY DATA - RESTRICTED DISTRIBUTION - CONTROLLED BY TERMS OF FAA AGREEMENT

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sliding probe was attached to the unit, which is shown in Figure 9. The probe connects to a Nortec NDT19e instrument, which also connects to a computer monitor for easy readout. A typical scan can be found in Figure 10, which shows the signal from a good hole, a hole with a 0.065" EDM notch, and a hole with 0.115" and 0.080" EDM notches.

# 3.3.2 Circumferential Butt Joints

Circumferential butt joints (B727 SSID Item F41) on each panel were inspected internally and externally. Each panel contained a circumferential butt joint, but the length varied on each panel. Panels F1 and F2 contained the butt joints at BS 360 and BS 870, respectively, from stringers 5L to 5R. Panels FT1/F3, FT2/F4, FT3/F5, FT4/F6 contained circumferential butt joints at BS 480, 680, 740 and 1010 from stringers 9L to 9R.

## 3.3.2.1 Internal Detailed Visual Inspection

An internal DVI was conducted via Airworthiness Directive 90-26-09, and Service Bulletin727-53-0084. The inspection examined for cracking along the outer row of fasteners in the circumferential butt joint, as shown in Figure 11.

# **3.3.2.2** External Detailed Visual Inspection

An external DVI was conducted via Airworthiness Directive 90-26-09, and Service Bulletin727-53-0084. The inspection examined for cracking along the outer row of fasteners in the circumferential butt joint, as shown in Figure 11.

# 3.3.2.3 External MFEC Inspection

An external MFEC was performed on every fastener per B727 NDT Manual, Part 6, 53-30-27, Figure 22. The main focus was to examine for cracking in the outer row of the circumferential butt joints, although every fastener was examined.

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# 3.3.3 Tear Straps

The tear straps were examined by an external ultrasonic inspection for debonding per the B727 NDT Manual, Part 4, 53-30-27, Figure 1, which is specified in Airworthiness Directive 90-20-18 and Service Bulletin 727-53-0082. The inspection used the S-9R Bond Tester from Zetec.

# 3.3.4 Crown Stringers, Clips, Skin, and Frame Attachments

The crown stringer joints, frames, and clips on all fuselage panels were examined for cracking in the skin, loose or missing fasteners, and corrosion. Inspections were conducted to examine for cracking in the skin at all skin-stringer attachments and skin-frame attachments per requirements from Service Bulletins 727-53-0041, 727-53-0188, and 727-53-0211.

# 3.3.4.1 Internal Detailed Visual Inspection

The panels associated with the forward cabin were inspected with an internal DVI to examine the skin, stringer clips, frames, and stringer joints (SSID F-45) and their associated attachments. Cracking and corrosion of the skin and clips were the main focus of the inspection, but also noted were any clips which had been replaced.

# 3.3.4.2 Internal HFEC Inspection

HFEC was conducted internally on stringer clips and frames which contained visual indications per the Boeing 727 NDT Manual, 51-00-00, Figure 23.

# 3.3.4.3 External MFEC Inspection

Additionally, a MFEC inspection per the Boeing 727 NDT Manual, 53-30-27, Figure 22 was conducted externally on every fastener to examine for cracking in the upper skin at all skin-stringer attachments and skin-frame attachments.

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## 3.3.5 Fastener Parameter Measurements

In addition to the various NDT and visual inspections conducted, fastener parameter measurements were taken of every fastener in all seven panels. These fastener parameters were fastener head diameter, countersink fit (flushness), fastener buck-tail diameter, and fastener remaining grip length. Each measurement type used calibrated equipment which were traceable to NIST standards (i.e., PMET items) with an accuracy of +/- 0.0001". This meets the requirements of Boeing Product Standards. Scotch-brite pads were used when required to see the outline of the fastener head, but otherwise the paint/finish was left intact during the measurements.

### 3.3.5.1 Fastener Head Diameter

The fastener head diameter was measured from the external surface by a digital micrometer. However, the fasteners were either 5/32" diameter, 3/16" diameter or 1/4" diameter depending on location. Due to this consistency, not all fastener head diameters were measured. Additionally, fastener type (flush, protruding head) was noted during the same time.

## 3.3.5.2 Fastener Flushness (Countersink fit)

Fastener flushness was measured via a dial indicator depth gauge from the external surface as shown in Figures 12 through 14. The indicator is capable of measuring head protrusion to a precision of 0.0001" and meets the requirements specified in Boeing Product Standard D-11805, Inspection of Head Diameters for Flush Fasteners. It is placed in a position that permits the gap in the wedge point stylus to span any head markings or recess in the center of the head.

Most fasteners were BACR15CE\* 100 degree countersunk fasteners of various diameters and grip lengths. The countersink angle is allowed to vary between 100 and 104 degrees, but there is no way to verify this parameter unless the fastener is removed. All countersunk fasteners are to be flush within +0.002", -0.001" per Boeing specifications. It is possible that the fastener could be over-driven,

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leaving a partially exposed countersink, as shown in Figure 15. These fasteners provided negative values of flushness.

## 3.3.5.3 Fastener buck-tail diameter

The fastener buck-tail diameter was measured from the internal surface by a digital micrometer, taking an average of three readings. Figure 16 shows a photograph of one of the measurements.

# 3.3.5.4 Fastener remaining grip length

The remaining grip length of each fastener was measured from the internal surface using a depth gauge as shown in Figure 17. A typical depth gauge, similar to the one found in Figure 12, could not be used due to the obstruction of stringers. The gauge was pressed down until flush with the skin, leaving protrusions and/or indentations from the fasteners which were then measured with the digital micrometer. Figure 18 shows the resulting dimension measured, which added to the stack-up thickness provides the total grip length.

#### **3.3.6** Crack Measurements

For all visual indications emanating from fasteners, the crack length, origin orientation, and angle were measured, using a 10X magnifier, flashlight and mirror. Figure 19 provides an illustration of these details, which are measured from the view that contains the crack. Additionally, photographs were taken of these areas.

Every crack location was named in a standard way with 6 distinct fields:

- Field 1: Fuselage Station of the nearest frame forward of damage location
- Field 2: Inches aft from Field 1 frame station. Precision = 1/10 in. Since these are floating frames, physical measurements should use nearby known fuselage stations, such as butt splices
- Field 3: Nearest Stringer above damage location
- Field 4: Inches down from Field 3 stringer (arc length, measured on skin). Precision = 1/10 in. Measured from stringer fastener centerline

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- Field 5: Structure that is damaged, such as Skin, Upper Skin, Lower Skin, Frame, Doubler, Clip.
   Uses the same name for structures that Boeing uses
- Field 6: Damaged detail, such as Hole, Edge, Radius or None

A few hypothetical examples follow in Table 3 for a better understanding of this naming convention. Negative numbers are allowed so that positive is down and aft, negative is forward and up, corresponding to BS and stringer numbers, respectively.

Table 3. Naming convention used during the inspections (hypothetical examples only).

Description	Naming Convention Used
Crack in the S-4L lap joint lower row at FS 465	FS 460: +5.0: S-4L: +1.0: Lower Skin: Hole
Crack in the FS 360 frame chord, 3" below S-3L	FS 360: +0.0: S-3L: +3.0: Frame: Chord
Crack in the S-4L lap joint upper row upper skin at	FS 460: +5.0: S-4L: -1.0: Upper Skin: Hole
FS 465	
Crack in the FS 681 butt joint fwd outer row, above	FS 680: -2.0: S-2L: -1.5: Skin: Hole
S-2L	

## 4.0 DETAILED RESULTS AND DISCUSSION

Details of the procedures for removal of the specimens from the aircraft, and the exact location and orientation with respect to the aircraft are documented in previously deliverables, the Target Area Report (CLIN 0001c) and the Removal of Specimens Report. This report includes documentation of the general condition of the panels after shipment to Atlanta in addition to results of various NDT and visual inspections, and measurements of detailed fastener parameters such as rivet head and tail diameters, countersink fits, and remaining grip length.

Included in the Removal of Specimens report are photographs taken before and after removal. Table 4 provides a description of each panel examined during the Pre-Teardown Inspections, including location from the aircraft. Panel F2 was cut into F2A and F2B for ease of handling. Detailed engineering drawings of each panel are provided later.

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Table 4. Description of the panels examined during the Pre-Teardown Inspections.

ID NUMBER	DESCRIPTION	LOCATION
NUMBER		
F1	Forward Crown Pressure Vessel	BS 352 - 460, stringer 5L - 6R
F2	Aft Crown Pressure Vessel	BS 850 - 969, stringer 5L - 5R
F3/FT1	Forward Crown Pressure Vessel	BS 460 - 600, stringer 9L - 9R
F4/FT2	Forward Crown Pressure Vessel	BS 600 - 720A, stringer 9L - 9R
F5/FT3	Forward Crown Pressure Vessel	BS 720A - 760, stringer 9L - 9R
F6/FT4	Aft Crown Pressure Vessel	BS 969 - 1109, stringer 9L - 9R
F9	Forward Lower Pressure Vessel	BS 500 - 640, stringer 25L - 27L

Upon arrival in Atlanta, the specimens were unpacked by removing the top and sides of the custombuilt crates. No damage was noted, except to one corner of a crate, but this damage was confined exclusively to the crate and did not damage the fuselage panel inside. The internal ribs of the specially designed crates further precluded any damage during transport.

The fuselage panels were then moved to a secure, climate-controlled location for semi-permanent storage. Figure 20 shows this area with both test panels and optional panels. This area will also serve as the storage location of the components to be used in the optional program at a later date. Figures 21 and 22 show the four test panels after removal from the crates with no damage noted. Appendix A shows additional photographs of the initial walk-around inspections and final condition of the removed sections upon arrival and unpacking in Atlanta.

The area also provided sufficient room to work and conduct the various inspections described earlier. Wing flap stands with a sheet of plywood laid across them were used as tables in order to provide access to examine the panels internally (See Figure 23).

Fastener parameters measurements such a fastener head diameter, flushness (countersink fit), fastener buck-tail diameter, and remaining grip length are found in the Database. The initial database is a contract deliverable via Phase 1, CLIN 0001j.

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## **4.1 Panel F1**

The panel designated F1 represents BS 352 to BS 460, from stringers 5L to 6R. It includes a circumferential butt joint at BS 360. Figure 1 shows the location of the panel in relation to the aircraft.

# **4.1.1 Inspection Results**

The inspection results of current and advanced technologies are presented in the following sections. Results of the fastener parameters (head-diameter, flushness, grip length, buck-tail diameter, etc.) are contained in the Database. A report from the Database of the indication information on panel F1 can be found in Appendix I.

# **4.1.1.1** External LFEC Sliding Probe (Lap Joint)

Sliding probe LFEC was conducted on stringers 4L and 4R with no indications noted.

# 4.1.1.2 Internal MFEC (Lap Joint)

The internal MFEC revealed several indications. Figure 24 shows the internal MFEC inspections being conducted. Two indications were found at 2 fasteners on stringer 4R and 17 indications were found at 13 fasteners on stringer 4L as shown in Tables 5 and 6. The locations of the indications are shown on a schematic for reference in Figure 25. Figure 26 shows a representative rejectable signal from the MFEC inspection at 4R, BS 720B, hole #7, forward side. Other screen representations of indications are found in Appendix C and are similar to the scan shown in Figure 26.

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Table 5. Indications found on the lower row of the longitudinal lap joint at stringer 4L with internal MFEC.

Notation	Station	Rivet Number	Forward/Aft/Both
BS 380: +7.1: S-4L: +1.0: Lower skin: Hole	380	5	Aft
BS 380: +8.2: S-4L: +1.0: Lower skin: Hole	380	6	Aft
BS 400: +3.7: S-4L: +1.0: Lower skin: Hole	400	2	Forward
BS 400: +7.1: S-4L: +1.0: Lower skin: Hole	400	5	Forward
BS 400: +10.5: S-4L: +1.0: Lower skin: Hole	400	8	Aft
BS 400: +12.8: S-4L: +1.0: Lower skin: Hole	400	10	Forward/Aft
BS 400: +13.9: S-4L: +1.0: Lower skin: Hole	400	11	Forward/Aft
BS 400: +18.5: S-4L: +1.0: Lower skin: Hole	400	15	Forward
BS 420: +4.8: S-4L: +1.0: Lower skin: Hole	420	3	Forward/Aft
BS 420: +6.0: S-4L: +1.0: Lower skin: Hole	420	4	Forward/Aft
BS 420: +7.2: S-4L: +1.0: Lower skin: Hole	420	5	Forward
BS 420: +8.2: S-4L: +1.0: Lower skin: Hole	420	6	Forward
BS 420: +12.8: S-4L: +1.0: Lower skin: Hole	420	10	Forward

Table 6. Indications found on the lower row of the longitudinal lap joint at stringer 4R with internal MFEC.

Notation	Station	Rivet Number	Forward/Aft/Both
BS 420: +13.9: S-4R: +1.0: Lower skin: Hole	420	11	Aft
BS 440: +12.8: S-4R: +1.0: Lower skin: Hole	440	10	Forward

# **4.1.1.3** External Detailed Visual Inspection

An external detailed visual inspection revealed some paint flaking noted on stringer 4L at BS 360 +4". This is pictured in Appendix D. No evidence of corrosion or cracking was noted.

# **4.1.1.4 Internal Detailed Visual Inspection**

Four indications were found with an internal detailed visual inspection between BS 400 and BS 440 on stringer 4L. These are shown in Table 7 and Figure 25. No visual indications were found on stringer

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4R. These indications were verified with internal MFEC. A comparison of the internal detailed visual inspection and the internal MFEC is found in section 4.9.

Figure 27 shows a representative photograph of cracks found during the detailed visual inspection of stringer 4R. Additional photographs showing indication locations can be found in Appendix D. Table 8 shows the crack parameters which were measured after discovery via the internal detailed visual inspection of the lower row of fasteners on the longitudinal lap joints.

Table 7. Indications from the internal detailed visual inspection of the lower row of the longitudinal lap joints.

Notation	Stringer	BS Panel	Rivet Number	Verified ?
BS 400: +13.9: S-4L: +1.0: Lower skin: Hole	4L	400-420	11	Verified
BS 400: +18.5: S-4L: +1.0: Lower skin: Hole	4L	400-420	15	Verified
BS 420: +7.1: S-4L: +1.0: Lower skin: Hole	4L	420-440	5	Verified
BS 420: +12.8: S-4L: +1.0: Lower skin: Hole	4L	420-440	10	Verified

Table 8. Crack parameters of internal detailed visual inspection indications.

Notation	Crack length	Crack start (degrees)	Crack angle (degrees)
BS 400: +13.9: S-4L: +1.0: Lower skin: Hole	0.170	100	25
BS 400: +18.5: S-4L: +1.0: Lower skin: Hole	0.155	110	110
BS 420: +7.1: S-4L: +1.0: Lower skin: Hole	0.190	90	90
BS 420: +12.8: S-4L: +1.0: Lower skin: Hole	0.145	120	100

# **4.1.1.5 Internal HFEC (Stringer clips)**

An internal HFEC inspection to examine for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments was conducted with no indications noted.

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# **4.1.1.6** External MFEC (All fasteners)

An external MFEC inspection to examine for cracking in the upper skin at every fastener, particularly at all skin to stringer and skin to frame attachments, was conducted with no indications noted.

# 4.1.1.7 MOI

MOI found two indications at two fasteners between BS 380 and BS 400 on the lower row of the longitudinal lap joint at stringer 4L. These are shown in Table 9 and Appendix F.

Table 9. Indications from MOI of the longitudinal lap joints on panel F1.

Notation	Stringer	BS Panel	Rivet Number	Fwd/Aft/ Both
BS 380: +6.0: S-4L: +1.0: Lower skin: Hole	4L	380	4	Aft
BS 380: +7.2: S-4L: +1.0: Lower skin: Hole	4L	380	5	Aft

## **4.1.1.8 Rivet Check**

Inspection of the lower row of fasteners of the longitudinal lap joint at stringer 4L via Rivet Check revealed 6 total indications, none of which were rejectable. Table 10 shows the location information of each indication. Figure 28 shows a screen representation example of a rejectable indication. Additional screen representations are shown in Appendix E. The LFEC inspections used a 0.100" EDM notch in a 0.050"/0.040" thick specimen for calibration.

Some indications were deemed to be from the lower edge of the upper skin, and other indications were similar to the "Malibu waves" typical of an oblong hole or worked fastener. Figure 29 shows an example of a suspected signal from the lower edge of the upper skin (i.e., at 180 degrees). Figure 30 shows a screen representation of a "Malibu wave". Stringer 4L did not reveal any indications. Due to time constraints, the upper row of fasteners on the longitudinal lap joints were not examined on panel F1.

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Figures 31-33 show the Rivet Check inspection being conducted on the panels. Figure 34 shows the erratic rivet alignment on the lower row of fasteners of the longitudinal lap joint which causes indications, making some fasteners uninspectable with Rivet Check. Figure 35 shows an external view of the erratic nature of the rivet alignment at the fasteners shown in Figure 34.

Table 10. Indications from Rivet Check on the lower row of the longitudinal lap joint at stringer 4L on panel F1.

Notation	Stg	BS	Rivet No.	Reject	Non- reject	2 cracks?
BS 380: +6.0: S-4L: +1.0: Lower skin: Hole	4L	380	4		X	
BS 380: +7.2: S-4L: +1.0: Lower skin: Hole	4L	380	5		X	
BS 380: +8.3: S-4L: +1.0: Lower skin: Hole	4L	380	6		X	
BS 400: +6.0: S-4L: +1.0: Lower skin: Hole	4L	400	4		X	
BS 400: +8.3: S-4L: +1.0: Lower skin: Hole	4L	400	6		X	
BS 400: +18.5: S-4L: +1.0: Lower skin: Hole	4L	400	15		X	

# 4.1.1.9 Eddy Current C-scan

Eddy current C-scan of the lower row of fasteners on the longitudinal lap joints at stringers 4L and 4R did not reveal any indications. Screen representations are found in Appendix G.

# **4.1.1.10 Tear Strap UT**

There were four areas of indications found during the ultrasonic inspection of the tear straps. These are shown in Table 11. Figure 36 shows a photograph of the inspection being conducted. A screen representation of a typical indication is found in Figure 37, and a photograph of the external surface shows the approximate location of the indication (Figure 38). Each of these areas contained a multitude of indications. Indications were found during inspections of tear-strap debonding at the circumferential butt joint at BS 360. This location does not have bonded tear straps, but does contain other bonded structure. However, these indications produced signals which were not consistent or similar to signals from consistently occurring structure. Appendix H shows the location of the indications from the external surface. Most indications were locations in the rivet pattern, between the rivets.

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All four areas of indications were found at the circumferential butt joint at BS 360. Therefore, an internal visual inspection was conducted to possibly explain the indication. However, no explanation could be found. Figure 39 shows an inside view with no obvious explanation. Additional photographs and screen representations can be found in Appendix H.

Table 11. Indications from ultrasonic inspection of tear straps on panel F1.

Notation	Stringer	<b>BS Panel</b>
BS 360: 1.0: S-2L: +1.0: Outer Skin: Debond	2-4L	360
BS 360: 1.0: S4R: +1.0: Outer Skin: Debond	4-6R	360
BS 360: 1.0: S-2R: +1.0: Outer Skin: Debond	2-4R	360
BS 360: 1.0: S-4L: +1.0: Outer Skin: Debond	4-6L	360

### 4.2 Panel F2A

The panel designated F2A represents BS 850 to BS 950A, from stringers 5L to 5R. It includes a circumferential butt joint at BS 870. Figure 1 shows the location of the panel in relation to the aircraft.

## **4.2.1 Inspection Results**

The inspection results of current and advanced technologies are presented in the following sections. Results of the fastener parameters (head-diameter, flushness, grip length, buck-tail diameter, etc.) are contained in the Database. A report from the Database of the indication information on panel F2A can be found in Appendix I.

## **4.2.1.1** External LFEC Sliding Probe (Lap Joint)

Sliding probe LFEC was conducted on the lower row of fasteners at stringers 4L and 4R with no indications noted.

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# **4.2.1.2 Internal MFEC (Lap Joint)**

Internal MFEC was conducted on the lower row of fasteners at stringers 4L and 4R with no indications noted.

## 4.2.1.3 External Detailed Visual Inspection

An external detailed visual inspection revealed some paint flaking along stringer 4L. This is pictured in Appendix D. No evidence of corrosion or cracking was noted.

# **4.2.1.4 Internal Detailed Visual Inspection**

An internal detailed visual inspection to examine for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments was conducted on panel F2A with no indications noted.

# **4.2.1.5 Internal HFEC (Stringer clips)**

An internal HFEC inspection to examine for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments was conducted with no indications noted.

### **4.2.1.6** External MFEC (All fasteners)

An external MFEC inspection to examine for cracking in the upper skin at every fastener, particularly at all skin to stringer and skin to frame attachments, was conducted. One indication was noted in the circumferential butt joint at BS 870 between stringers 2R and 3R. Photographs of this area are shown in Figures 40 and 41. Figures 42-45 show the external MFEC being conducted on the panels.

#### 4.2.1.7 MOI

MOI was performed on all rows of the longitudinal lap joints with no indications noted.

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#### **4.2.1.8 Rivet Check**

Rivet Check was not conducted on panel F2A.

## 4.2.1.9 Eddy Current C-scan

Eddy current C-scan of the lower row of fasteners on the longitudinal lap joints at stringers 4L and 4R did not reveal any indications. Screen representations can be found in Appendix G.

## **4.2.1.10 Tear Strap UT**

No indications were noted during the ultrasonic inspection of the tear straps.

#### 4.3 Panel F2B

The panel designated F2B represents BS 950A to BS 969, from stringers 5L to 5R. Figure 1 shows the location of the panel in relation to the aircraft.

## 4.3.1 Inspection Results

The inspection results of current and advanced technologies are presented in the following sections. Results of the fastener parameters (head-diameter, flushness, grip length, buck-tail diameter, etc.) are contained in the Database. A report from the Database of the indication information on panel F2B can be found in Appendix I.

## **4.3.1.1** External LFEC Sliding Probe (Lap Joint)

Sliding probe LFEC was conducted on the lower row of fasteners at stringers 4L and 4R with no indications noted.

### **4.3.1.2** Internal MFEC (Lap Joint)

Internal MFEC was conducted on the lower row of fasteners at stringers 4L and 4R with no indications noted.

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## 4.3.1.3 External Detailed Visual Inspection

An external detailed visual inspection was conducted with no indications noted.

## 4.3.1.4 Internal Detailed Visual Inspection

An internal detailed visual inspection was conducted on panel F2B with no indications noted.

# **4.3.1.5 Internal HFEC (Stringer clips)**

An internal HFEC inspection to examine for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments was conducted with no indications noted.

## **4.3.1.6** External MFEC (All fasteners)

An external MFEC inspection to examine for cracking in the upper skin at every fastener, particularly at all skin to stringer and skin to frame attachments, was conducted. Indications were noted on the lower row of fasteners of stringer 4R, at BS 950C, rivet #9 and BS 950F, rivet #6.

## 4.3.1.7 MOI

The MOI inspection revealed two indications on the longitudinal lap joint (all rows) at stringer 4L, shown in Table 12. No indications were found on the longitudinal lap joint at stringer 4R. Screen representations of each indication are found in Appendix F.

Table 12. Indications from MOI of the longitudinal lap joints on panel F2B.

Notation	Stringer	BS Panel	Rivet Number	Fwd/Aft/ Both
BS 950C: +11.7: S-4L: +1.0: Lower skin: Hole	4L	950C	9	Aft
BS 950F: +8.3: S-4L: +1.0: Lower skin: Hole	4L	950F	6	Aft

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#### **4.3.1.8 Rivet Check**

Rivet Check was not conducted on panel F2B.

## 4.3.1.9 Eddy Current C-scan

Eddy current C-scan of the lower row of fasteners on the longitudinal lap joints at stringers 4L and 4R did not reveal any indications.

## **4.3.1.10 Tear Strap UT**

No indications were noted during the ultrasonic inspection of the tear straps.

#### **4.4 Panel FT1/F3**

The panel designated FT1/F3 represents BS 460 to BS 600, from stringers 9L to 9R. It includes a circumferential butt joint at BS 480. Figure 1 shows the location of the panel in relation to the aircraft. Figure 46 shows a detailed engineering drawing of the panel.

### 4.4.1 Inspection Results

The inspection results of current and advanced technologies are presented in the following sections.

Results of the fastener parameters (head-diameter, flushness, grip length, buck-tail diameter, etc.) are contained in the Database. A report from the Database of the indication information on panel FT1/F3 can be found in Appendix I.

## **4.4.1.1** External LFEC Sliding Probe (Lap Joint)

Sliding probe LFEC was conducted on the lower row of fasteners on stringers 4L and 4R with no indications noted on 4L. There were eight indications at six fasteners noted on stringer 4R, five of which were previously identified during the Field Inspection. Results are found in Table 13. Figure 47 shows a representative rejectable signal from the LFEC inspection at stringer 4R, BS 520, hole #11, forward

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side. Other screen representations of indications are found in Appendix B and are similar to the scan shown in Figure 47.

Table 13. Indications found on the longitudinal lap joint at stringer 4R with LFEC sliding probe.

Notation	Station	Rivet Number	Forward/Aft/Both
BS 520: +13.2: S-4R: +1.0: Lower skin: Hole	520	11	Forward
BS 520: +15.3: S-4R: +1.0: Lower skin: Hole	520	13	Forward/Aft
BS 520: +16.4: S-4R: +1.0: Lower skin: Hole	520	14	Forward/Aft
BS 520: +17.4: S-4R: +1.0: Lower skin: Hole	520	15	Forward
BS 540: +4.7: S-4R: +1.0: Lower skin: Hole	540	3	Forward
BS 540: +7.9: S-4R: +1.0: Lower skin: Hole	540	6	Forward/Aft

# **4.4.1.2 Internal MFEC (Lap Joint)**

The internal MFEC revealed several indications. Seventy-six indications were found at 51 fasteners on the lower row of the longitudinal lap joint at stringer 4R on panel FT1/F3, but no indications were found on stringer 4L as shown in Table 14. The locations of the indications are shown on a schematic for reference in Figure 25. Figure 26 shows a representative rejectable signal from the MFEC inspection at stringer 4R, BS 720B, hole #7, forward side. Other screen representations of indications are found in Appendix C and are similar to the scan shown in Figure 26.

Table 14. Indications found on the lower row of the longitudinal lap joint at stringer 4R with internal MFEC.

Notation	Station	Rivet Number	Forward/Aft/Both
BS 500: +7.9: S-4R: +1.0: Lower skin: Hole	500	6	Forward
BS 500: +8.9: S-4R: +1.0: Lower skin: Hole	500	7	Forward
BS 500: +10.0: S-4R: +1.0: Lower skin: Hole	500	8	Forward
BS 500: +11.0: S-4R: +1.0: Lower skin: Hole	500	9	Forward/Aft
BS 500: +12.1: S-4R: +1.0: Lower skin: Hole	500	10	Forward
BS 500: +13.2: S-4R: +1.0: Lower skin: Hole	500	11	Forward
BS 500: +14.2: S-4R: +1.0: Lower skin: Hole	500	12	Forward
BS 520: +4.7: S-4R: +1.0: Lower skin: Hole	520	3	Forward
BS 520: +10.0: S-4R: +1.0: Lower skin: Hole	520	8	Aft
BS 520: +11.0: S-4R: +1.0: Lower skin: Hole	520	9	Forward/Aft
BS 520: +12.1: S-4R: +1.0: Lower skin: Hole	520	10	Forward/Aft

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BS 520: +13.2: S-4R: +1.0: Lower skin: Hole	520	11	Forward/Aft
BS 520: +15.3: S-4R: +1.0: Lower skin: Hole	520	13	Forward/Aft
BS 520: +16.3: S-4R: +1.0: Lower skin: Hole	520	14	Forward/Aft
BS 520: +17.4: S-4R: +1.0: Lower skin: Hole	520	15	Forward/Aft
BS 540: +4.7: S-4R: +1.0: Lower skin: Hole	540	3	Forward/Aft
BS 540: +5.7: S-4R: +1.0: Lower skin: Hole	540	4	Forward/Aft
BS 540: +6.8: S-4R: +1.0: Lower skin: Hole	540	5	Forward/Aft
BS 540: +7.9: S-4R: +1.0: Lower skin: Hole	540	6	Forward/Aft
BS 540: +8.9: S-4R: +1.0: Lower skin: Hole	540	7	Forward/Aft
BS 540: +10.0: S-4R: +1.0: Lower skin: Hole	540	8	Forward/Aft
BS 540: +11.0: S-4R: +1.0: Lower skin: Hole	540	9	Forward
BS 540: +12.1: S-4R: +1.0: Lower skin: Hole	540	10	Forward/Aft
BS 540: +13.2: S-4R: +1.0: Lower skin: Hole	540	11	Forward
BS 540: +14.2: S-4R: +1.0: Lower skin: Hole	540	12	Forward
BS 540: +16.3: S-4R: +1.0: Lower skin: Hole	540	14	Bottom
BS 560: +3.6: S-4R: +1.0: Lower skin: Hole	560	2	Forward
BS 560: +4.7: S-4R: +1.0: Lower skin: Hole	560	3	Aft
BS 560: +7.9: S-4R: +1.0: Lower skin: Hole	560	6	Forward
BS 560: +8.9: S-4R: +1.0: Lower skin: Hole	560	7	Forward
BS 560: +10.0: S-4R: +1.0: Lower skin: Hole	560	8	Aft
BS 560: +11.0: S-4R: +1.0: Lower skin: Hole	560	9	Aft
BS 560: +12.1: S-4R: +1.0: Lower skin: Hole	560	10	Forward/Aft
BS 560: +13.2: S-4R: +1.0: Lower skin: Hole	560	11	Forward/Aft
BS 560: +14.2: S-4R: +1.0: Lower skin: Hole	560	12	Forward/Aft
BS 560: +15.3: S-4R: +1.0: Lower skin: Hole	560	13	Aft
BS 560: +16.3: S-4R: +1.0: Lower skin: Hole	560	14	Forward/Aft
BS 560: +17.4: S-4R: +1.0: Lower skin: Hole	560	15	Forward/Aft
BS 580: +4.8: S-4R: +1.0: Lower skin: Hole	580	3	Forward/Aft
BS 580: +6.0: S-4R: +1.0: Lower skin: Hole	580	4	Forward
BS 580: +7.1: S-4R: +1.0: Lower skin: Hole	580	5	Forward/Aft
BS 580: +8.2: S-4R: +1.0: Lower skin: Hole	580	6	Forward
BS 580: +9.4: S-4R: +1.0: Lower skin: Hole	580	7	Forward
BS 580: +10.5: S-4R: +1.0: Lower skin: Hole	580	8	Forward/Bottom
BS 580: +11.7: S-4R: +1.0: Lower skin: Hole	580	9	Forward/Aft
BS 580: +12.8: S-4R: +1.0: Lower skin: Hole	580	10	Forward/Aft
BS 580: +13.9: S-4R: +1.0: Lower skin: Hole	580	11	Forward
BS 580: +15.1: S-4R: +1.0: Lower skin: Hole	580	12	Forward/Aft
BS 580: +16.2: S-4R: +1.0: Lower skin: Hole	580	13	Forward
BS 580: +17.3: S-4R: +1.0: Lower skin: Hole	1	<b>+</b>	<u> </u>
<b>DS</b> 360: +17.3: S-4R: +1.0: Lower skill: Hole	580	14	Forward

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# **4.4.1.3** External Detailed Visual Inspection

An external detailed visual inspection revealed some paint flaking and minor corrosion noted on stringer 4R at BS 580 -3" and at BS 520 +10". These are pictured in Appendix D. No evidence of cracking was noted.

## 4.4.1.4 Internal Detailed Visual Inspection

Twenty indications were found on panel FT1/F3 between BS 500 and BS 600 on stringer 4R. These are shown in Table 15 and Figure 25. Seventeen of these indications were verified with internal MFEC. No visual indications were found on stringer 4L. A comparison of the internal detailed visual inspection and the internal MFEC is found in section 4.9. Photographs of all indications can be found in Appendix D. Table 16 shows the crack parameters which were measured after discovery via the internal detailed visual inspection of the longitudinal lap joints.

Table 15. Indications from the internal detailed visual inspection of the longitudinal lap joints.

Notation	Stringer	BS Panel	Rivet	Verified
rotation			Number	?
BS 500: +11.0: S-4R: +1.0: Lower skin: Hole	4R	500-520	9	Verified
BS 520: +10.0: S-4R: +1.0: Lower skin: Hole	4R	520-540	8	Verified
BS 520: +11.0: S-4R: +1.0: Lower skin: Hole	4R	520-540	9	Verified
BS 520: +12.1: S-4R: +1.0: Lower skin: Hole	4R	520-540	10	Verified
BS 520: +13.2: S-4R: +1.0: Lower skin: Hole	4R	520-540	11	Verified
BS 520: +14.2: S-4R: +1.0: Lower skin: Hole	4R	520-540	12	Not
BS 520: +15.3: S-4R: +1.0: Lower skin: Hole	4R	520-540	13	Verified
BS 520: +16.3: S-4R: +1.0: Lower skin: Hole	4R	520-540	14	Verified
BS 540: +4.7: S-4R: +1.0: Lower skin: Hole	4R	540-560	3	Verified
BS 540: +5.7: S-4R: +1.0: Lower skin: Hole	4R	540-560	4	Verified
BS 540: +6.8: S-4R: +1.0: Lower skin: Hole	4R	540-560	5	Verified
BS 540: +7.9: S-4R: +1.0: Lower skin: Hole	4R	540-560	6	Verified
BS 540: +8.9: S-4R: +1.0: Lower skin: Hole	4R	540-560	7	Verified
BS 540: +10.0: S-4R: +1.0: Lower skin: Hole	4R	540-560	8	Verified
BS 540: +11.0: S-4R: +1.0: Lower skin: Hole	4R	540-560	9	Verified
BS 540: +12.1: S-4R: +1.0: Lower skin: Hole	4R	540-560	10	Verified
BS 540: +15.3: S-4R: +1.0: Lower skin: Hole	4R	540-560	13	Not
BS 540: +16.3: S-4R: +1.0: Lower skin: Hole	4R	540-560	14	Verified
BS 540: +17.4: S-4R: +1.0: Lower skin: Hole	4R	540-560	15	Not
BS 560: +13.2: S-4R: +1.0: Lower skin: Hole	4R	560-580	11	Verified

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Table 16. Crack parameters of internal detailed visual inspection indications.

Notation	Crack length	Crack start (degrees)	Crack angle (degrees)
BS 500: +11.0: S-4R: +1.0: Lower skin: Hole	0.150	110	80
BS 520: +10.0: S-4R: +1.0: Lower skin: Hole	0.175	110	90
BS 520: +11.0: S-4R: +1.0: Lower skin: Hole	0.210	70	60
BS 520: +12.1: S-4R: +1.0: Lower skin: Hole	0.140	120	100
BS 520: +13.2: S-4R: +1.0: Lower skin: Hole	0.290	100	90
BS 520: +14.2: S-4R: +1.0: Lower skin: Hole	0.120	60	40
BS 520: +15.3: S-4R: +1.0: Lower skin: Hole	0.275	250	90
BS 520: +16.3: S-4R: +1.0: Lower skin: Hole	0.280	100	100
BS 540: +4.7: S-4R: +1.0: Lower skin: Hole	0.250	90	90
BS 540: +5.7: S-4R: +1.0: Lower skin: Hole	0.175	80	80
BS 540: +6.8: S-4R: +1.0: Lower skin: Hole	0.190	60	75
BS 540: +7.9: S-4R: +1.0: Lower skin: Hole	0.225	250	80
BS 540: +8.9: S-4R: +1.0: Lower skin: Hole	0.185	260	90
BS 540: +10.0: S-4R: +1.0: Lower skin: Hole	0.200	280	100
BS 540: +11.0: S-4R: +1.0: Lower skin: Hole	0.155	110	100
BS 540: +12.1: S-4R: +1.0: Lower skin: Hole	0.190	90	85
BS 540: +15.3: S-4R: +1.0: Lower skin: Hole	0.090	60	80
BS 540: +16.3: S-4R: +1.0: Lower skin: Hole	0.120	70	90
BS 540: +17.4: S-4R: +1.0: Lower skin: Hole	0.130	75	40
BS 560: +13.2: S-4R: +1.0: Lower skin: Hole	0.210	270	80

# **4.4.1.5 Internal HFEC (Stringer clips)**

An internal HFEC inspection to examine for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments was conducted with no indications noted.

## **4.4.1.6 External MFEC (All fasteners)**

An external MFEC inspection to examine for cracking in the upper skin at every fastener, particularly at all skin to stringer and skin to frame attachments, was conducted with no indications noted.

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#### 4.4.1.7 MOI

MOI was performed on all rows of the longitudinal lap joints. Figures 48 and 49 show the MOI inspection being conducted. The inspection revealed eight indications at six fasteners on the longitudinal lap joint at stringer 4R, shown in Table 17. No indications were found on the longitudinal lap joint at stringer 4L. Figure 50 shows a photograph of the external skin showing the location of the MOI indications found on the lower row of the longitudinal lap joint between BS 520 and BS 540. A screen representation of the indication found at rivet number 14 is shown in Figure 51. Cracks appear as elongated holes as described in Figure 8. Additional photographs and screen representations of all indications can be found in Appendix F.

Table 17. Indications from MOI of the longitudinal lap joints on panel FT1/F3.

Notation	Stringer	BS Panel	Rivet Number	Fwd/Aft/ Both
BS 520: +13.2: S-4R: +1.0: Lower skin: Hole	4R	520	11	Forward
BS 520: +15.3: S-4R: +1.0: Lower skin: Hole	4R	520	13	Forward/Aft
BS 520: +16.4: S-4R: +1.0: Lower skin: Hole	4R	520	14	Forward/Aft
BS 520: +17.4: S-4R: +1.0: Lower skin: Hole	4R	520	15	Forward
BS 540: +4.7: S-4R: +1.0: Lower skin: Hole	4R	540	3	Forward
BS 540: +7.9: S-4R: +1.0: Lower skin: Hole	4R	540	6	Forward

## **4.4.1.8 Rivet Check**

Inspection of the lower row of fasteners of the longitudinal lap joint at stringer 4R via Rivet Check revealed 6 rejectable indications among 19 total indications. Table 18 shows the location information of each indication. Figure 28 shows a screen representation example of a rejectable indication. Additional screen representations are shown in Appendix E. Stringer 4L revealed no indications. The LFEC inspections used a 0.100" EDM notch in a 0.050"/0.040" thick specimen for calibration.

Some indications were deemed to be from the lower edge of the upper skin, and other indications were similar to the "Malibu waves" typical of an oblong hole or worked fastener. Figure 29 shows an

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example of a suspected signal from the lower edge of the upper skin (i.e., at 180 degrees). Figure 30 shows a screen representation of a "Malibu wave".

The Rivet Check inspection system was also used to inspect the upper row of fasteners in the longitudinal lap joints. The HFEC inspections used EDM notches of 0.040" and 0.050" in a 0.050"/0.040" thick specimen for calibration. No indications were noted on stringer 4R. Stringer 4L was not examined due to time constraints.

Table 18. Indications from Rivet Check on the lower row of the longitudinal lap joint at stringer 4R on panel FT1/F3.

Notation	Stg	BS	Rivet	Reje	Non-	2	Comment
			No.	ct	reject	cracks?	
BS 480: +3.7: S-4R: +1.0: Lower skin: Hole	4R	480	2	X			
BS 500: +9.0: S-4R: +1.0: Lower skin: Hole	4R	500	7		X		
BS 500: +10.0: S-4R: +1.0: Lower skin: Hole	4R	500	8		X	X	
BS 500: +11.1: S-4R: +1.0: Lower skin: Hole	4R	500	9		X		Oblong
BS 520: +4.7: S-4R: +1.0: Lower skin: Hole	4R	520	3		X		edge
BS 520: +11.1: S-4R: +1.0: Lower skin: Hole	4R	520	9		X		Oblong
BS 520: +12.1: S-4R: +1.0: Lower skin: Hole	4R	520	10		X		
BS 520: +13.2: S-4R: +1.0: Lower skin: Hole	4R	520	11	X			
BS 520: +14.3: S-4R: +1.0: Lower skin: Hole	4R	520	12		X		
BS 520: +15.3: S-4R: +1.0: Lower skin: Hole	4R	520	13		X	X	
BS 520: +16.4: S-4R: +1.0: Lower skin: Hole	4R	520	14	X		X	
BS 520: +17.4: S-4R: +1.0: Lower skin: Hole	4R	520	15	X			
BS 540: +4.7: S-4R: +1.0: Lower skin: Hole	4R	540	3	X			
BS 540: +5.8: S-4R: +1.0: Lower skin: Hole	4R	540	4		X		
BS 540: +6.8: S-4R: +1.0: Lower skin: Hole	4R	540	5		X		
BS 540: +7.9: S-4R: +1.0: Lower skin: Hole	4R	540	6	X			
BS 540: +15.3: S-4R: +1.0: Lower skin: Hole	4R	540	13		X		Malibu
BS 560: +3.7: S-4R: +1.0: Lower skin: Hole	4R	560	2		X		edge
BS 560: +7.9: S-4R: +1.0: Lower skin: Hole	4R	560	6		X		edge

## 4.4.1.9 Eddy Current C-scan

The C-scan eddy current had indications, which are shown in Table 19. One indication was found on the lower row of fasteners on stringer 4L, while 30 indications were noted on stringer 4R. Figure 52

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shows a photograph of the inspection being conducted, and Figure 53 shows screen representations of the signals. Additional screen representations and photographs can be found in Appendix G.

Table 19. Indications from C-scan eddy current of the longitudinal lap joints on panel FT1/F3.

Notation	Stringer Stringer	BS	Rivet
BS 560: +4.7: S-4L: +1.0: Lower skin: Hole	4L	560	3
BS 480: +5.8: S-4R: +1.0: Lower skin: Hole	4R	480	4
BS 480: +12.1: S-4R: +1.0: Lower skin: Hole	4R	480	10
BS 500: +11.1: S-4R: +1.0: Lower skin: Hole	4R	500	9
BS 520: +9.0: S-4R: +1.0: Lower skin: Hole	4R	520	7
BS 520: +10.0: S-4R: +1.0: Lower skin: Hole	4R	520	8
BS 520: +11.1: S-4R: +1.0: Lower skin: Hole	4R	520	9
BS 520: +12.1: S-4R: +1.0: Lower skin: Hole	4R	520	10
BS 520: +13.2: S-4R: +1.0: Lower skin: Hole	4R	520	11
BS 520: +15.3: S-4R: +1.0: Lower skin: Hole	4R	520	13
BS 520: +16.4: S-4R: +1.0: Lower skin: Hole	4R	520	14
BS 520: +17.4: S-4R: +1.0: Lower skin: Hole	4R	520	15
BS 540: +4.7: S-4R: +1.0: Lower skin: Hole	4R	540	3
BS 540: +5.8: S-4R: +1.0: Lower skin: Hole	4R	540	4
BS 540: +6.8: S-4R: +1.0: Lower skin: Hole	4R	540	5
BS 540: +7.9: S-4R: +1.0: Lower skin: Hole	4R	540	6
BS 540: +9.0: S-4R: +1.0: Lower skin: Hole	4R	540	7
BS 540: +10.0: S-4R: +1.0: Lower skin: Hole	4R	540	8
BS 540: +11.1: S-4R: +1.0: Lower skin: Hole	4R	540	9
BS 540: +12.1: S-4R: +1.0: Lower skin: Hole	4R	540	10
BS 560: +4.7: S-4R: +1.0: Lower skin: Hole	4R	560	3
BS 560: +6.8: S-4R: +1.0: Lower skin: Hole	4R	560	5
BS 560: +9.0: S-4R: +1.0: Lower skin: Hole	4R	560	6
BS 560: +10.0: S-4R: +1.0: Lower skin: Hole	4R	560	7
BS 560: +11.1: S-4R: +1.0: Lower skin: Hole	4R	560	8
BS 560: +12.1: S-4R: +1.0: Lower skin: Hole	4R	560	9
BS 560: +13.2: S-4R: +1.0: Lower skin: Hole	4R	560	10
BS 560: +14.3: S-4R: +1.0: Lower skin: Hole	4R	560	11
BS 560: +15.3: S-4R: +1.0: Lower skin: Hole	4R	560	12
BS 560: +17.4: S-4R: +1.0: Lower skin: Hole	4R	560	13
BS 560: +18.9: S-4R: +1.0: Lower skin: Hole	4R	560	15

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# **4.4.1.10 Tear Strap UT**

No indications were noted during the ultrasonic inspection of the tear straps.

### 4.5 Panel FT2/F4

The panel designated FT2/F4 represents BS 600 to BS 720A, from stringers 9L to 9R. It includes a circumferential butt joint at BS 680. Figure 1 shows the location of the panel in relation to the aircraft. Figure 54 shows a detailed engineering drawing of the panel.

# **4.5.1 Inspection Results**

The inspection results of current and advanced technologies are presented in the following sections. Results of the fastener parameters (head-diameter, flushness, grip length, buck-tail diameter, etc.) are contained in the Database. A report from the Database of the indication information on panel FT2/F4 can be found in Appendix I.

### **4.5.1.1** External LFEC Sliding Probe (Lap Joint)

Sliding probe LFEC was conducted on the lower row of fasteners at stringers 4L and 4R with no indications noted on 4L. There were five indications noted, four of which were previously identified during the Field Inspection. Results are found in Table 20.

Table 20. Indications found on the lower row of fasteners on the longitudinal lap joint at stringer 4R with LFEC sliding probe.

Notation	Station	Rivet Number	Forward/Aft/Both
BS 600: +11.1: S-4R: +1.0: Lower skin: Hole	600	9	Forward
BS 600: +13.2: S-4R: +1.0: Lower skin: Hole	600	11	Forward
BS 720: +6.0: S-4R: +1.0: Lower skin: Hole	720	4	Aft
BS 720: +7.2: S-4R: +1.0: Lower skin: Hole	720	5	Forward
BS 720: +9.4: S-4R: +1.0: Lower skin: Hole	720	7	Aft

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# **4.5.1.2 Internal MFEC (Lap Joint)**

The internal MFEC revealed numerous indications. Forty-nine indications were found at 32 fasteners on stringer 4R on panel FT2/F4, but no indications were found on stringer 4L as shown in Table 21. The locations of the indications are shown on a schematic for reference in Figure 25. Figure 26 shows a representative rejectable signal from the MFEC inspection at stringer 4R, BS 720B, hole #7, forward side. Other screen representations of indications are found in Appendix C and are similar to the scan shown in Figure 26.

Table 21. Indications found on the longitudinal lap joint at stringer 4R with internal MFEC.

Notation	Station	Rivet Number	Forward/Aft/Both
BS 600: +11.0: S-4R: +1.0: Lower skin: Hole	600	9	Forward/Aft
BS 600: +12.1: S-4R: +1.0: Lower skin: Hole	600	10	Forward/Aft
BS 600: +13.2: S-4R: +1.0: Lower skin: Hole	600	11	Forward/Aft
BS 600: +14.2: S-4R: +1.0: Lower skin: Hole	600	12	Forward/Aft
BS 620: +5.7: S-4R: +1.0: Lower skin: Hole	620	4	Forward
BS 620: +6.8: S-4R: +1.0: Lower skin: Hole	620	5	Forward/Aft
BS 620: +7.9: S-4R: +1.0: Lower skin: Hole	620	6	Forward/Aft
BS 620: +8.9: S-4R: +1.0: Lower skin: Hole	620	7	Forward
BS 620: +10.0: S-4R: +1.0: Lower skin: Hole	620	8	Forward
BS 620: +11.0: S-4R: +1.0: Lower skin: Hole	620	9	Forward
BS 640: +8.9: S-4R: +1.0: Lower skin: Hole	640	7	Forward
BS 640: +11.0: S-4R: +1.0: Lower skin: Hole	640	9	Forward
BS 660: +15.3: S-4R: +1.0: Lower skin: Hole	660	13	Forward/Aft
BS 660: +16.3: S-4R: +1.0: Lower skin: Hole	660	14	Forward/Aft
BS 680: +14.2: S-4R: +1.0: Lower skin: Hole	680	12	Forward/Aft
BS 700: +7.9: S-4R: +1.0: Lower skin: Hole	700	6	Forward
BS 700: +10.0: S-4R: +1.0: Lower skin: Hole	700	8	Forward
BS 700: +11.0: S-4R: +1.0: Lower skin: Hole	700	9	Forward
BS 700: +12.1: S-4R: +1.0: Lower skin: Hole	700	10	Forward
BS 700: +13.2: S-4R: +1.0: Lower skin: Hole	700	11	Forward
BS 700: +15.3: S-4R: +1.0: Lower skin: Hole	700	13	Forward
BS 700: +16.3: S-4R: +1.0: Lower skin: Hole	700	14	Forward
BS 700: +17.4: S-4R: +1.0: Lower skin: Hole	700	15	Forward
BS 720: +6.0: S-4R: +1.0: Lower skin: Hole	720	4	Forward/Aft
BS 720: +7.1: S-4R: +1.0: Lower skin: Hole	720	5	Forward/Aft

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BS 720: +8.2: S-4R: +1.0: Lower skin: Hole	720	6	Forward/Aft
BS 720: +9.4: S-4R: +1.0: Lower skin: Hole	720	7	Forward/Aft
BS 720: +10.5: S-4R: +1.0: Lower skin: Hole	720	8	Forward/Aft
BS 720: +11.7: S-4R: +1.0: Lower skin: Hole	720	9	Forward/Aft
BS 720: +12.8: S-4R: +1.0: Lower skin: Hole	720	10	Forward/Aft
BS 720: +13.9: S-4R: +1.0: Lower skin: Hole	720	11	Forward/Aft
BS 720: +15.1: S-4R: +1.0: Lower skin: Hole	720	12	Forward/Aft

# **4.5.1.3** External Detailed Visual Inspection

An external detailed visual inspection revealed some paint flaking and minor corrosion noted on stringer 4R at BS 640 -5". This is pictured in Appendix D. No evidence of cracking was noted.

## 4.5.1.4 Internal Detailed Visual Inspection

Eleven indications were found on the lower row of fasteners on panel FT2/F4 between BS 600 to BS 640 and BS 720 to BS 720A on stringer 4R. These are shown in Table 22 and represented schematically on Figure 25. All of these indications were verified with internal MFEC. No visual indications were found on stringer 4L. A comparison of the internal detailed visual inspection and the internal MFEC is found in section 4.9. Photographs of all indications can be found in Appendix D. Table 23 shows the crack parameters which were measured after discovery via the internal detailed visual inspection of the longitudinal lap joints.

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Table 22. Indications from the internal detailed visual inspection of the longitudinal lap joints.

Notation	Stringer	BS Panel	Rivet	Verified
			Number	?
BS 600: +11.0: S-4R: +1.0: Lower skin: Hole	4R	600-620	9	Verified
BS 600: +12.1: S-4R: +1.0: Lower skin: Hole	4R	600-620	10	Verified
BS 600: +13.2: S-4R: +1.0: Lower skin: Hole	4R	600-620	11	Verified
BS 620: +5.7: S-4R: +1.0: Lower skin: Hole	4R	620-640	4	Verified
BS 620: +6.8: S-4R: +1.0: Lower skin: Hole	4R	620-640	5	Verified
BS 620: +7.9: S-4R: +1.0: Lower skin: Hole	4R	620-640	6	Verified
BS 620: +9.0: S-4R: +1.0: Lower skin: Hole	4R	620-640	7	Verified
BS 620: +11.0: S-4R: +1.0: Lower skin: Hole	4R	620-640	9	Verified
BS 720: +11.7: S-4R: +1.0: Lower skin: Hole	4R	720-720A	9	Verified
BS 720: +13.9: S-4R: +1.0: Lower skin: Hole	4R	720-720A	11	Verified
BS 720: +15.1: S-4R: +1.0: Lower skin: Hole	4R	720-720A	12	Verified

Table 23. Crack parameters of internal detailed visual inspection indications.

Notation	Crack length	Crack start (degrees)	Crack angle (degrees)
BS 600: +11.0: S-4R: +1.0: Lower skin: Hole	0.310	90	90
BS 600: +12.1: S-4R: +1.0: Lower skin: Hole	0.250	120	80
BS 600: +13.2: S-4R: +1.0: Lower skin: Hole	0.280	80	100
BS 620: +5.7: S-4R: +1.0: Lower skin: Hole	0.130	110	100
BS 620: +6.8: S-4R: +1.0: Lower skin: Hole	0.120	100	100
BS 620: +7.9: S-4R: +1.0: Lower skin: Hole	0.120	80	70
BS 620: +9.0: S-4R: +1.0: Lower skin: Hole	0.150	90	60
BS 620: +11.0: S-4R: +1.0: Lower skin: Hole	0.190	120	80
BS 720: +11.7: S-4R: +1.0: Lower skin: Hole	0.160	110	100
BS 720: +13.9: S-4R: +1.0: Lower skin: Hole	0.200	80	110
BS 720: +15.1: S-4R: +1.0: Lower skin: Hole	0.220	70	100

Additionally, the internal detailed visual inspection examined for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments. There were 16 indications on clips and/or frames. Table 24 displays the indication information and Figure 55 shows an example of a detailed visual indication on a stringer clip. However, none of these indications were verified with internal HFEC (next section) and are considered to be false calls.

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Table 24. Indication information from internal detailed visual inspection.

Tuoie 21. Indication information from meeting detailed visital inspection.				
Indication notation	Notes			
BS 620: 0: S-4L: +2.0: Frame: Hole	Rough-looking hole			
BS 640: 0: S-7R: +4.5: Frame: Hole	Rough-looking hole			
BS 660: 0: S-3L: 0.0: Clip: Hole	Stringer clip, upper hole			
BS 660: 0: S-7L: 0.0: Clip: Hole	Stringer clip, upper hole			
BS 660: 0: S-4R: 0.0: Clip: Hole	Stringer clip, lower hole			
BS 680: 0: S-1: 0.0: Frame: Web	Possible Frame crack			
BS 680: 0: S-2R: 0.0: Clip: Hole	Stringer clip, lower hole			
BS 680: 0: S-3R: 0.0: Clip: Hole	Stringer clip, lower hole			
BS 700: 0: S-8R: 0.0: Clip: Hole	Stringer clip, lower hole			
BS 700: 0: S-7R: -3.0: Frame: Web	Possible Frame crack			
BS 700: 0: S-7L: -1.5: Frame: Hole	Rough-looking hole			
BS 720: 0: S-7R: -1.0: Frame: Hole	Rough-looking hole			
BS 720: 0: S-4R: 0.0: Clip: Hole	Stringer clip, upper hole			
BS 720A: 0: S-4L: 0.0: Clip: Hole	Stringer clip, upper hole			
BS 720A: 0: S-4R: 0.0: Clip: Hole	Stringer clip, lower and upper holes			

## **4.5.1.5 Internal HFEC (Stringer clips)**

An internal HFEC inspection to examine for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments was conducted with no indications noted. The detailed visual indications noted during the Field inspections and the Pre-teardown inspection (see above) were not confirmed with internal HFEC and are considered false calls.

Replacement stringer clips were noted at BS 620 and stringer 7R, BS 620 and stringer 7L, BS 680 and stringer 7L, BS 680 and stringer 7L, and BS 720A and stringer 7R. The replacement stringer clips were evident due to the yellow paint instead of the typical green primer (See Figure 56).

## **4.5.1.6** External MFEC (All fasteners)

An external MFEC inspection to examine for cracking in the upper skin at every fastener, particularly at all skin to stringer and skin to frame attachments, was conducted with no indications noted.

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#### 4.5.1.7 **MOI**

MOI was performed on all rows of the longitudinal lap joints. The inspection revealed two indications on the longitudinal lap joint at stringer 4R, shown in Table 25. No indications were found on the longitudinal lap joint at stringer 4L. Screen representations of each indication are found in Appendix F.

Table 25. Indications from MOI of the longitudinal lap joints on panel FT2/F4.

Notation	Stringer	BS Panel	Rivet Number	Fwd/Aft/ Both
BS 600: +11.1: S-4R: +1.0: Lower skin: Hole	4R	600	9	Forward
BS 600: +13.2: S-4R: +1.0: Lower skin: Hole	4R	600	11	Forward

#### 4.5.1.8 Rivet Check

Inspection of the lower row of fasteners of the longitudinal lap joint at stringer 4R via Rivet Check revealed 2 rejectable indications among 29 total indications. Table 26 shows the location information of each indication. Figure 28 shows a screen representation example of a rejectable indication. Additional screen representations are shown in Appendix E. Stringer 4L produced 6 rejectable indications among 17 total indications. The LFEC inspections used a 0.100" EDM notch in a 0.050"/0.040" thick specimen for calibration.

Some indications were deemed to be from the lower edge of the upper skin, and other indications were similar to the "Malibu waves" typical of an oblong hole or worked fastener. Figure 29 shows an example of a suspected signal from the lower edge of the upper skin (i.e., at 180 degrees). Figure 30 shows a screen representation of a "Malibu wave". All but one indication on stringer 4L are believed to be from the edge (Table 27).

The Rivet Check inspection system was also used to inspect the upper row of fasteners in the longitudinal lap joints. The HFEC inspections used EDM notches of 0.040" and 0.050" in a 0.050"/0.040" thick specimen for calibration. There were 9 rejectable indications among 32 total indications on stringer 4R as shown in Table 28. Stringer 4L was not examined due to time constraints.

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Table 26. Indications from Rivet Check on the lower row of the longitudinal lap joint at stringer 4R on panel FT2/F4.

Notation	Stg	BS	Rivet	Reje	Non-	2	Comment
2 (0 0002 0 2			No.	ct	reject	cracks?	
BS 600: +11.1: S-4R: +1.0: Lower skin: Hole	4R	600	9	X		X	
BS 600: +12.1: S-4R: +1.0: Lower skin: Hole	4R	600	10		X	X	
BS 600: +13.2: S-4R: +1.0: Lower skin: Hole	4R	600	11	X			
BS 600: +14.3: S-4R: +1.0: Lower skin: Hole	4R	600	12		X	X	
BS 620: +5.8: S-4R: +1.0: Lower skin: Hole	4R	620	4		X	X	
BS 620: +6.8: S-4R: +1.0: Lower skin: Hole	4R	620	5		X	X	
BS 620: +7.9: S-4R: +1.0: Lower skin: Hole	4R	620	6		X	X	
BS 620: +9.0: S-4R: +1.0: Lower skin: Hole	4R	620	7		X		
BS 620: +11.1: S-4R: +1.0: Lower skin: Hole	4R	620	9		X		
BS 640: +4.7: S-4R: +1.0: Lower skin: Hole	4R	640	3		X		edge
BS 640: +10.0: S-4R: +1.0: Lower skin: Hole	4R	640	8		X		edge
BS 640: +12.1: S-4R: +1.0: Lower skin: Hole	4R	640	10		X		Malibu
BS 660: +3.7: S-4R: +1.0: Lower skin: Hole	4R	660	2		X		edge
BS 660: +10.0: S-4R: +1.0: Lower skin: Hole	4R	660	8		X		edge
BS 660: +16.4: S-4R: +1.0: Lower skin: Hole	4R	660	14		X	X	
BS 660: +18.6: S-4R: +1.0: Lower skin: Hole	4R	660	16		X		edge
BS 700: +7.9: S-4R: +1.0: Lower skin: Hole	4R	700	6		X		
BS 720: +3.7: S-4R: +1.0: Lower skin: Hole	4R	720	2		X		Malibu
BS 720: +6.0: S-4R: +1.0: Lower skin: Hole	4R	720	4		X		
BS 720: +7.2: S-4R: +1.0: Lower skin: Hole	4R	720	5		X	X	
BS 720: +8.3: S-4R: +1.0: Lower skin: Hole	4R	720	6		X	X	
BS 720: +9.4: S-4R: +1.0: Lower skin: Hole	4R	720	7		X	X	
BS 720: +10.6: S-4R: +1.0: Lower skin: Hole	4R	720	8		X		
BS 720: +11.7: S-4R: +1.0: Lower skin: Hole	4R	720	9		X		Malibu
BS 720: +12.8: S-4R: +1.0: Lower skin: Hole	4R	720	10		X		
BS 720: +14.0: S-4R: +1.0: Lower skin: Hole	4R	720	11		X		
BS 720: +15.1: S-4R: +1.0: Lower skin: Hole	4R	720	12		X	X	
BS 720: +16.3: S-4R: +1.0: Lower skin: Hole	4R	720	13		X		Malibu
BS 720: +17.4: S-4R: +1.0: Lower skin: Hole	4R	720	14		X		

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Table 27. Indications from Rivet Check on the lower row of the longitudinal lap joint at stringer 4L on panel FT2/F4.

Notation	Stg	BS	Rivet	Reje	Non-	2	Comment
			No.	ct	reject	cracks?	
BS 600: +11.1: S-4L: +1.0: Lower skin: Hole	4L	600	9		X		edge
BS 600: +12.1: S-4L: +1.0: Lower skin: Hole	4L	600	10		X		edge
BS 600: +14.3: S-4L: +1.0: Lower skin: Hole	4L	600	12		X		edge
BS 600: +16.4: S-4L: +1.0: Lower skin: Hole	4L	600	14		X		edge
BS 600: +17.4: S-4L: +1.0: Lower skin: Hole	4L	600	15		X		edge
BS 640: +5.8: S-4L: +1.0: Lower skin: Hole	4L	640	4	X			edge
BS 640: +6.8: S-4L: +1.0: Lower skin: Hole	4L	640	5		X		edge
BS 640: +7.9: S-4L: +1.0: Lower skin: Hole	4L	640	6		X		edge
BS 640: +10.0: S-4L: +1.0: Lower skin: Hole	4L	640	8		X		edge
BS 660: +17.5: S-4L: +1.0: Lower skin: Hole	4L	660	16	X			edge
BS 660: +18.6: S-4L: +1.0: Lower skin: Hole	4L	660	17	X			edge
BS 680: +2.6: S-4L: +1.0: Lower skin: Hole	4L	680	1	X			edge
BS 680: +3.7: S-4L: +1.0: Lower skin: Hole	4L	680	2	X			edge
BS 680: +4.7: S-4L: +1.0: Lower skin: Hole	4L	680	3	X			edge
BS 680: +5.8: S-4L: +1.0: Lower skin: Hole	4L	680	4		X		
BS 680: +6.8: S-4L: +1.0: Lower skin: Hole	4L	680	5		X		edge
BS 680: +9.0: S-4L: +1.0: Lower skin: Hole	4L	680	7		X		edge

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Table 28. Indications from Rivet Check on the upper row of the longitudinal lap joint at stringer 4R on panel FT2/F4.

Notation	Stg	BS	Rivet	Reje	Non-	2	Comment
1100001			No.	ct	reject	cracks?	
BS 600: +9.0: S-4R: +1.0: Upper skin: Hole	4R	600	7	X			
BS 600: +11.1: S-4R: +1.0: Upper skin: Hole	4R	600	9	7.1	X		
BS 600: +12.1: S-4R: +1.0: Upper skin: Hole	4R	600	10	X	- 11		
BS 600: +15.3: S-4R: +1.0: Upper skin: Hole	4R	600	13		X		
BS 600: +17.4: S-4R: +1.0: Upper skin: Hole	4R	600	15		X	X	Not
BS 620: +9.0: S-4R: +1.0: Upper skin: Hole	4R	620	7		X		Ugly
BS 620: +10.0: S-4R: +1.0: Upper skin: Hole	4R	620	8		X		Ugly
BS 620: +11.1: S-4R: +1.0: Upper skin: Hole	4R	620	9		X		Ugly
BS 620: +12.1: S-4R: +1.0: Upper skin: Hole	4R	620	10		X		Ugly
BS 620: +13.2: S-4R: +1.0: Upper skin: Hole	4R	620	11		X		• • • • • • • • • • • • • • • • • • • •
BS 620: +14.3: S-4R: +1.0: Upper skin: Hole	4R	620	12		X		Ugly
BS 660: +3.7: S-4R: +1.0: Upper skin: Hole	4R	660	2		X		Not
BS 660: +5.8: S-4R: +1.0: Upper skin: Hole	4R	660	4		X		
BS 660: +7.9: S-4R: +1.0: Upper skin: Hole	4R	660	6		X		
BS 660: +11.1: S-4R: +1.0: Upper skin: Hole	4R	660	9	X			
BS 660: +12.1: S-4R: +1.0: Upper skin: Hole	4R	660	10		X		
BS 680: +2.6: S-4R: +1.0: Upper skin: Hole	4R	680	1		X		edge?
BS 700: +6.0: S-4R: +1.0: Upper skin: Hole	4R	700	4		X		
BS 700: +7.9: S-4R: +1.0: Upper skin: Hole	4R	700	7		X		
BS 700: +9.4: S-4R: +1.0: Upper skin: Hole	4R	700	8		X		
BS 700: +16.3: S-4R: +1.0: Upper skin: Hole	4R	700	13		X		
BS 720: +3.7: S-4R: +1.0: Upper skin: Hole	4R	720	2	X			
BS 720: +4.9: S-4R: +1.0: Upper skin: Hole	4R	720	3		X		
BS 720: +6.0: S-4R: +1.0: Upper skin: Hole	4R	720	4	X			
BS 720: +7.2: S-4R: +1.0: Upper skin: Hole	4R	720	5		X		
BS 720: +8.3: S-4R: +1.0: Upper skin: Hole	4R	720	6		X		
BS 720: +9.4: S-4R: +1.0: Upper skin: Hole	4R	720	7		X		
BS 720: +11.7: S-4R: +1.0: Upper skin: Hole	4R	720	9	X			
BS 720: +15.1: S-4R: +1.0: Upper skin: Hole	4R	720	12	X			
BS 720: +16.3: S-4R: +1.0: Upper skin: Hole	4R	720	13	X			
BS 720: +17.4: S-4R: +1.0: Upper skin: Hole	4R	720	14	X			
BS 720: +18.5: S-4R: +1.0: Upper skin: Hole	4R	720	15		X		

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# 4.5.1.9 Eddy Current C-scan

The C-scan eddy current had indications, which are shown in Table 29. Twelve indications were found on the lower row of fasteners on stringer 4R. No indications were found on stringer 4L. Figure 52 shows a photograph of the inspection being conducted, and Figure 53 shows screen representations of the signals. Additional screen representations and photographs can be found in Appendix G.

Table 29. Indications from C-scan eddy current of the longitudinal lap joints on panel FT2/F4.

Notation	Stringer	BS Panel	Rivet Number
BS 600: +10.0: S-4R: +1.0: Lower skin: Hole	4R	600	8
BS 600: +12.1: S-4R: +1.0: Lower skin: Hole	4R	600	10
BS 720: +6.0: S-4R: +1.0: Lower skin: Hole	4R	720	4
BS 720: +7.2: S-4R: +1.0: Lower skin: Hole	4R	720	5
BS 720: +8.3: S-4R: +1.0: Lower skin: Hole	4R	720	6
BS 720: +9.4: S-4R: +1.0: Lower skin: Hole	4R	720	7
BS 720: +10.6: S-4R: +1.0: Lower skin: Hole	4R	720	8
BS 720: +11.7: S-4R: +1.0: Lower skin: Hole	4R	720	9
BS 720: +12.8: S-4R: +1.0: Lower skin: Hole	4R	720	10
BS 720: +13.9: S-4R: +1.0: Lower skin: Hole	4R	720	11
BS 720: +15.1: S-4R: +1.0: Lower skin: Hole	4R	720	12
BS 720: +16.3: S-4R: +1.0: Lower skin: Hole	4R	720	13

## **4.5.1.10 Tear Strap UT**

No indications were noted during the ultrasonic inspection of the tear straps.

## 4.6 Panel FT3/F5

The panel designated FT3/F5 represents BS 720A to BS 760, from stringers 9L to 9R. It includes a circumferential but joint at BS 740. Figure 1 shows the location of the panel in relation to the aircraft. Figure 57 shows a detailed engineering drawing of the panel.

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## **4.6.1 Inspection Results**

The inspection results of current and advanced technologies are presented in the following sections. Results of the fastener parameters (head-diameter, flushness, grip length, buck-tail diameter, etc.) are contained in the Database. A report from the Database of the indication information on panel FT3/F5 can be found in Appendix I.

## **4.6.1.1 External LFEC Sliding Probe (Lap Joint)**

Sliding probe LFEC was conducted on the lower row of fasteners on stringers 4L and 4R with no indications noted on 4L. There were nine indications at seven fasteners noted, six of which were previously identified during the Field Inspection. Results are found in Table 30.

Table 30. Indications found on the longitudinal lap joint at stringer 4R with LFEC sliding probe.

Notation	Station	Rivet Number	Forward/Aft/Both
BS 720A: +5.8: S-4R: +1.0: Lower skin: Hole	720A	4	Forward
BS 720B: +1.6: S-4R: +1.0: Lower skin: Hole	720B	1	Forward
BS 720B: +2.6: S-4R: +1.0: Lower skin: Hole	720B	2	Forward
BS 720B: +6.8: S-4R: +1.0: Lower skin: Hole	720B	5	Forward
BS 720B: +9.0: S-4R: +1.0: Lower skin: Hole	720B	7	Forward /Aft
BS 720B: +10.0: S-4R: +1.0: Lower skin: Hole	720B	8	Forward/Aft
BS 720C: +10.0: S-4R: +1.0: Lower skin: Hole	720C	8	Forward

## 4.6.1.2 Internal MFEC (Lap Joint)

The internal MFEC revealed 50 indications at 31 fasteners on the lower row of fasteners on stringer 4R on panel FT3/F5, but no indications were found on stringer 4L. See Table 31 for detailed information and Figure 25 for the locations of the indications shown on a schematic for reference. Figure 26 shows a representative rejectable signal from the MFEC inspection at stringer 4R, BS 720B, hole #7, forward side. Other screen representations of indications are found in Appendix C and are similar to the scan shown in Figure 26.

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Table 31. Indications found on the longitudinal lap joint at stringer 4R with internal MFEC.

Notation Notation	Station	Rivet Number	Forward/Aft/Both
BS 720A: +3.6: S-4R: +1.0: Lower skin: Hole	720A	2	Forward
BS 720A: +4.7: S-4R: +1.0: Lower skin: Hole	720A	3	Forward/Aft
BS 720A: +5.7: S-4R: +1.0: Lower skin: Hole	720A	4	Forward
BS 720A: +6.8: S-4R: +1.0: Lower skin: Hole	720A	5	Forward/Aft
BS 720A: +7.9: S-4R: +1.0: Lower skin: Hole	720A	6	Forward/Aft
BS 720A: +8.9: S-4R: +1.0: Lower skin: Hole	720A	7	Forward/Aft
BS 720A: +10.0: S-4R: +1.0: Lower skin: Hole	720A	8	Forward/Aft
BS 720A: +11.0: S-4R: +1.0: Lower skin: Hole	720A	9	Forward/Aft
BS 720B: +2.6: S-4R: +1.0: Lower skin: Hole	720B	1	Forward/Aft
BS 720B: +3.6: S-4R: +1.0: Lower skin: Hole	720B	2	Forward
BS 720B: +4.7: S-4R: +1.0: Lower skin: Hole	720B	3	Forward
BS 720B: +5.7: S-4R: +1.0: Lower skin: Hole	720B	4	Forward/Aft
BS 720B: +6.8: S-4R: +1.0: Lower skin: Hole	720B	5	Forward/Aft
BS 720B: +7.9: S-4R: +1.0: Lower skin: Hole	720B	6	Forward/Aft
BS 720B: +8.9: S-4R: +1.0: Lower skin: Hole	720B	7	Forward/Aft
BS 720B: +10.0: S-4R: +1.0: Lower skin: Hole	720B	8	Forward/Aft
BS 720B: +11.0: S-4R: +1.0: Lower skin: Hole	720B	9	Forward/Aft
BS 720B: +12.1: S-4R: +1.0: Lower skin: Hole	720B	10	Forward/Aft
BS 720B: +13.2: S-4R: +1.0: Lower skin: Hole	720B	11	Forward/Aft
BS 720B: +14.2: S-4R: +1.0: Lower skin: Hole	720B	12	Forward
BS 720B: +15.3: S-4R: +1.0: Lower skin: Hole	720B	13	Forward/Aft
BS 720B: +16.3: S-4R: +1.0: Lower skin: Hole	720B	14	Forward/Aft
BS 720C: +7.9: S-4R: +1.0: Lower skin: Hole	720C	6	Forward/Aft
BS 720C: +8.9: S-4R: +1.0: Lower skin: Hole	720C	7	Forward
BS 720C: +10.0: S-4R: +1.0: Lower skin: Hole	720C	8	Forward/Aft
BS 720C: +15.3: S-4R: +1.0: Lower skin: Hole	720C	13	Forward
BS 720C: +17.4: S-4R: +1.0: Lower skin: Hole	720C	15	Forward
BS 720D: +7.9: S-4R: +1.0: Lower skin: Hole	720D	6	Forward
BS 720D: +8.9: S-4R: +1.0: Lower skin: Hole	720D	7	Aft
BS 720D: +10.0: S-4R: +1.0: Lower skin: Hole	720D	8	Aft
BS 720E: +7.9: S-4R: +1.0: Lower skin: Hole	720E	9	Forward

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## **4.6.1.3** External Detailed Visual Inspection

An external detailed visual inspection revealed some paint flaking and minor corrosion noted on stringer 4R at BS 720F +5". This is pictured in Appendix D. No evidence of cracking was noted.

## 4.6.1.4 Internal Detailed Visual Inspection

Two visual indications were found on panel FT3/F5 between BS 720D and BS 720E on stringer 4R. These are shown in Table 32 and schematically in Figure 25. These indications were verified with internal MFEC. No visual indications were found on stringer 4L. A comparison of the internal detailed visual inspection and the internal MFEC is found in section 4.9. Photographs of all visual indications can be found in Appendix D. Table 33 shows the crack parameters which were measured after discovery via the internal detailed visual inspection of the longitudinal lap joints.

Table 32. Indications from the internal detailed visual inspection of the lower row of fasteners on the longitudinal lap joints.

Notation	Stringer	BS Panel	Rivet Number	Verified ?
BS 720D: +10.0: S-4R: +1.0: Lower skin: Hole	4R	720D-720E	8	Verified
BS 720D: +12.1: S-4R: +1.0: Lower skin: Hole	4R	720D-720E	10	Not

Table 33. Crack parameters of internal detailed visual inspection indications.

Notation	Crack length	Crack start (degrees)	Crack angle (degrees)
BS 720D: +10.0: S-4R: +1.0: Lower skin: Hole	0.185	255	100
BS 720D: +12.1: S-4R: +1.0: Lower skin: Hole	0.110	120	80

Additionally, the internal detailed visual inspection examined for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments. There were 10 indications on clips and/or frames. Table 34 displays the indication information. However, none of these indications were verified with internal HFEC (next section) and are considered false calls.

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Table 34. Indication information from internal detailed visual inspection.

Indication notation	Notes
BS 720B: 0: S-4L: 0.0: Clip: Hole	Stringer clip, upper hole
BS 720B: 0: S-4L: +4.5: Frame: Hole	Rough-looking hole
BS 720B: 0: S-5R: 0.0: Clip: Hole	Stringer clip, lower hole
BS 720B: 0: S-7R: 0.0: Clip: Hole	Stringer clip, lower hole
BS 720C: 0: S-5L: 0.0: Clip: Hole	Stringer clip, upper hole
BS 720D: 0: S-3R: 0.0: Clip: Hole	Stringer clip, upper hole
BS 720D: 0: S-4R: 0.0: Clip: Hole	Stringer clip, lower hole
BS 720E: 0: S-4R: 0.0: Clip: Hole	Stringer clip, lower hole
BS 720E: 0: S-5L: 0.0: Clip: Hole	Stringer clip, lower hole
BS 720F: 0: S-4R: 0.0: Clip: Hole	Stringer clip, lower hole

# **4.6.1.5 Internal HFEC (Stringer clips)**

An internal HFEC inspection to examine for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments was conducted with no indications noted. The detailed visual indications noted during the Field inspections and the Pre-teardown inspection (see above) were not confirmed with internal HFEC and are considered false calls.

Replacement stringer clips were noted at BS 720D and stringer 7R, BS 720D and stringer 7L, BS 720F and stringer 7L, and BS 720F and stringer 7R. The replacement stringer clips were evident due to the yellow paint instead of the typical green primer.

### **4.6.1.6 External MFEC (All fasteners)**

An external MFEC inspection to examine for cracking in the upper skin at every fastener, particularly at all skin to stringer and skin to frame attachments, was conducted with no indications noted.

## 4.6.1.7 MOI

MOI was performed on all rows of the longitudinal lap joints. The inspection revealed seven indications at five fasteners on the longitudinal lap joint at stringer 4R, shown in Table 35. No indications were found on the longitudinal lap joint at stringer 4L. Screen representations of each indication are found in Appendix F.

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Table 35. Indications from MOI of the longitudinal lap joints on panel FT3/F5.

Notation	Stringer	BS Panel	Rivet Number	Fwd/Aft/ Both
BS 720A: +5.8: S-4R: +1.0: Lower skin: Hole	4R	720A	4	Forward
BS 720B: +6.8: S-4R: +1.0: Lower skin: Hole	4R	720B	5	Forward
BS 720B: +9.0: S-4R: +1.0: Lower skin: Hole	4R	720B	7	Forward/Aft
BS 720B: +10.0: S-4R: +1.0: Lower skin: Hole	4R	720B	8	Forward/Aft
BS 720C: +10.0: S-4R: +1.0: Lower skin: Hole	4R	720C	8	Forward

#### **4.6.1.8 Rivet Check**

Inspection of the lower row of fasteners of the longitudinal lap joint at stringer 4R via Rivet Check revealed 4 rejectable indications among 18 total indications. However, the inspection was only successful from BS 720A to BS 720D. The fasteners increase in diameter at BS 720D, rendering fasteners between BS 720D and BS 760 uninspectable with Rivet Check due to the decreased distance between lower edge of the fastener and the skin (edge distance).

Table 36 shows the location information of each indication. Figure 28 shows a screen representation example of a rejectable indication. Additional screen representations are shown in Appendix E. The LFEC inspections used a 0.100" EDM notch in a 0.050"/0.040" thick specimen for calibration.

Some indications were deemed to be from the lower edge of the upper skin, and other indications were similar to the "Malibu waves" typical of an oblong hole or worked fastener. Figure 29 shows an example of a suspected signal from the lower edge of the upper skin (i.e., at 180 degrees). Figure 30 shows a screen representation of a "Malibu wave". Stringer 4L was not examined to due difficulty in the edge distance.

The Rivet Check inspection system was also used to inspect the upper row of fasteners in the longitudinal lap joints. The HFEC inspections used EDM notches of 0.040" and 0.050" in a 0.050"/0.040" thick specimen for calibration. There were 2 rejectable indications among 5 total indications on stringer 4R as shown in Table 37. Stringer 4L was not examined due to time constraints.

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Table 36. Indications from Rivet Check on the lower row of the longitudinal lap joint at stringer 4R on panel FT3/F5.

paner 1 15/1 5.							
Notation	Stg	BS	Rivet	Rej	Non-	2	Comment
			No.	ect	reject	cracks?	
BS 720A: +4.7: S-4R: +1.0: Lower skin: Hole	4R	720A	3		X		
BS 720A: +5.8: S-4R: +1.0: Lower skin: Hole	4R	720A	4	X			
BS 720A: +6.8: S-4R: +1.0: Lower skin: Hole	4R	720A	5		X		Weird
BS 720A: +7.9: S-4R: +1.0: Lower skin: Hole	4R	720A	6		X		Weird
BS 720A: +9.0: S-4R: +1.0: Lower skin: Hole	4R	720A	7		X		Weird
BS 720A: +11.1: S-4R: +1.0: Lower skin: Hole	4R	720A	9		X		Weird
BS 720B: +2.6: S-4R: +1.0: Lower skin: Hole	4R	720B	1		X		
BS 720B: +5.8: S-4R: +1.0: Lower skin: Hole	4R	720B	4		X		
BS 720B: +6.8: S-4R: +1.0: Lower skin: Hole	4R	720B	5		X		
BS 720B: +9.0: S-4R: +1.0: Lower skin: Hole	4R	720B	7	X		X	
BS 720B: +10.0: S-4R: +1.0: Lower skin: Hole	4R	720B	8	X		X	
BS 720C: +3.7: S-4R: +1.0: Lower skin: Hole	4R	720C	2		X		edge
BS 720C: +7.9: S-4R: +1.0: Lower skin: Hole	4R	720C	6		X		
BS 720C: +10.0: S-4R: +1.0: Lower skin: Hole	4R	720C	8	X			
BS 720C: +12.1: S-4R: +1.0: Lower skin: Hole	4R	720C	10		X		edge
BS 720C: +13.2: S-4R: +1.0: Lower skin: Hole	4R	720C	11		X		edge
BS 720C: +15.3: S-4R: +1.0: Lower skin: Hole	4R	720C	13		X		Weird
BS 720C: +17.4: S-4R: +1.0: Lower skin: Hole	4R	720C	15		X		Malibu

Table 37. Indications from Rivet Check on the upper row of the longitudinal lap joint at stringer 4R on panel FT3/F5.

Notation	Stg	BS	Rivet	Rej	Non-	2	Comme
			No.	ect	reject	cracks?	nts
BS 720B: +3.7: S-4R: +1.0: Upper skin: Hole	4R	720B	2		X		
BS 720B: +4.7: S-4R: +1.0: Upper skin: Hole	4R	720B	3	X			
BS 720B: +9.0: S-4R: +1.0: Upper skin: Hole	4R	720B	7	X			
BS 720C: +10.0: S-4R: +1.0: Upper skin: Hole	4R	720C	8		X		
BS 720C: +11.1: S-4R: +1.0: Upper skin: Hole	4R	720C	9		X		

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# 4.6.1.9 Eddy Current C-scan

Eddy current C-scan of the lower row of the longitudinal lap joints at stringer 4L and 4R revealed 3 indications on stringer 4R. No indications were noted on stringer 4L. These are shown in Table 38. Figure 52 shows a photograph of the inspection being conducted, and Figure 53 shows a screen representation of the signals. Additional screen representations and photographs can be found in Appendix G.

Table 38. Indications from C-scan eddy current of the longitudinal lap joints on panel FT3/F5.

Notation		BS Panel	Rivet Number
BS 720B: +11.1: S-4R: +1.0: Lower skin: Hole	4R	720B	8
BS 720B: +12.1: S-4R: +1.0: Lower skin: Hole	4R	720B	9
BS 720C: +12.1: S-4R: +1.0: Lower skin: Hole	4R	720C	10

# **4.6.1.10 Tear Strap UT**

There were four areas of indications found during the ultrasonic inspection of the tear straps. These are shown in Table 39. A screen representation of an indication is found in Figure 37. Figure 38 shows the location of the indications from the external surface. Most indications were locations in the rivet pattern, between the rivets.

The four indications were found at the circumferential butt joint BS 740. This location does not have bonded tear straps, but does contain other bonded structure. Therefore, an internal visual inspection was conducted to possibly explain the indication. However, no explanation could be found. Figure 39 shows an inside view with no obvious explanation. Additional photographs and screen representations can be found in Appendix H.

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Table 39. Indications from ultrasonic inspection of tear straps on panel FT3/F5.

Notation	Stringer	<b>BS Panel</b>
BS 740: 1.0: S-4L: +1.0: Outer Skin: Debond	4-5L	740
BS 740: 1.0: S-3L: +1.0: Outer Skin: Debond	3-4L	740
BS 740: 1.0: S-8L: +1.0: Outer Skin: Debond	8-9L	740
BS 740: 1.0: S-8R: +1.0: Outer Skin: Debond	8-9R	740

#### **4.7 Panel FT4/F6**

The panel designated FT4/F6 represents BS 970 to BS 1109, from stringers 9L to 9R. It includes a circumferential but joint at BS 1010. Figure 1 shows the location of the panel in relation to the aircraft. Figure 58 shows a detailed engineering drawing of the panel.

## **4.7.1 Inspection Results**

The inspection results of current and advanced technologies are presented in the following sections. Results of the fastener parameters (head-diameter, flushness, grip length, buck-tail diameter, etc.) are contained in the Database. A report from the Database of the indication information on panel FT4/F6 can be found in Appendix I.

## **4.7.1.1** External LFEC Sliding Probe (Lap Joint)

Sliding probe LFEC was conducted on the lower row of fasteners on stringers 4L and 4R with no indications noted.

## **4.7.1.2** Internal MFEC (Lap Joint)

The internal MFEC was conducted on the lower row of fasteners on stringers 4L and 4R with no indications noted.

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## 4.7.1.3 External Detailed Visual Inspection

An external detailed visual inspection revealed a possible gap forming between the skins at the circumferential butt joint at BS 1010 and the longitudinal lap joint at stringer 4R. This is pictured in Appendix D. No evidence of cracking or corrosion was noted.

# **4.7.1.4** Internal Detailed Visual Inspection

No indication of cracking along the lower row of fasteners of the longitudinal lap joints was found during an internal detailed visual inspection of panel FT4/F6.

The internal detailed visual inspection also examined for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments. There were 9 indications on clips and/or frames. Table 40 displays the indication information and Figure 55 shows an example of a detailed visual indication on a stringer clip. However, none of these indications were verified with internal HFEC (next section) and are considered false calls.

Table 40. Indication information from internal detailed visual inspection.

Indication notation	Notes
BS 970: 0: S-8L: 0.0: Clip: Hole	Stringer clip, upper hole
BS 990: 0: S-4L: 0.0: Clip: Hole	Stringer clip, upper hole
BS 1010: 0: S-2L: 0.0: Clip: Hole	Stringer clip, upper hole
BS 1010: 0: S-3R: 0.0: Clip: Hole	Stringer clip, lower hole
BS 1030: 0: S-8R: 0.0: Clip: Hole	Stringer clip, upper hole
BS 1050: 0: S-8R: -2.4: Frame: Web	Possible Frame crack
BS 1050: 0: S-2L: 0.0: Clip: Hole	Stringer clip, upper and lower holes
BS 1090: 0: S-3L: 0.0: Clip: Hole	Stringer clip, upper hole

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## **Internal HFEC (Stringer clips)**

An internal HFEC inspection to examine for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments was conducted with no indications noted. The detailed visual indications noted during the Field inspection and the Pre-teardown inspection (see above) were not confirmed with internal HFEC and are considered false calls.

Replacement stringer clips were noted at BS 970 and stringer 7R, BS 970 and stringer 7L, BS 990 and stringer 7L, and BS 1090 and stringer 7R. The replacement stringer clips were evident due to the yellow paint instead of the typical green primer.

## **4.7.1.6** External MFEC (All fasteners)

An external MFEC inspection to examine for cracking in the upper skin at every fastener, particularly at all skin to stringer and skin to frame attachments, was conducted with no indications noted.

#### 4.7.1.7 **MOI**

No indications were noted during MOI of all rows of fasteners at longitudinal lap joints.

## **4.7.1.8 Rivet Check**

Rivet Check was not performed on panel FT4/F6 due to thickness restrictions.

## 4.7.1.9 Eddy Current C-scan

Eddy current C-scan of the lower row of the longitudinal lap joints at stringers 4L and 4R did not reveal any indications.

## **4.7.1.10 Tear Strap UT**

No indications were noted during the ultrasonic inspection of the tear straps.

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#### **4.8** Panel F9

The panel designated F9 represents BS 500 to BS 600, from stringers 25L to 27L. Protruding head fasteners (BACR15CE\*) were present on stringer 26L from BS 500 to BS 600.

## 4.8.1 Inspection Results

The inspection results of current and advanced technologies are presented in the following sections.

Results of the fastener parameters (head-diameter, flushness, grip length, buck-tail diameter, etc.) are contained in the Database. A report from the Database of the indication information on panel F9 can be found in Appendix I.

# **4.8.1.1** External LFEC Sliding Probe (Lap Joint)

Sliding probe LFEC was conducted on stringer 26L from BS 600 to BS 640 with no indications noted. Spot probe LFEC was conducted around the protruding head fasteners from BS 500 to BS 600 with no indications noted.

### 4.8.1.2 Internal MFEC (Lap Joint)

Internal MFEC was conducted on stringer 26L with no indications noted.

## 4.8.1.3 External Detailed Visual Inspection

No indications were found during an external detailed visual inspection of panel F9.

## **4.8.1.4 Internal Detailed Visual Inspection**

An internal detailed visual inspection was conducted on panel F9 with no indications noted.

### **4.8.1.5** Internal HFEC (Stringer clips)

An internal HFEC inspection to examine for cracking in the stringer clips, frames, and all skin to stringer and skin to frame attachments was conducted with no indications noted.

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## **4.8.1.6** External MFEC (All fasteners)

An external MFEC inspection to examine for cracking in the upper skin at every fastener, particularly at all skin to stringer and skin to frame attachments, was conducted with no indications noted.

#### 4.8.1.7 MOI

MOI was not performed on this panel due to the presence of protruding head fasteners.

#### **4.8.1.8 Rivet Check**

Rivet Check was not performed on this panel due to the presence of protruding head fasteners.

## 4.8.1.9 Eddy Current C-scan

Eddy current C-scan was not performed on this panel due to the presence of protruding head fasteners.

## 4.9 Comparison of Methods (Lap splices)

A comparison of indications and fasteners noted per bay at the longitudinal lap splices from internal MFEC, external LFEC, and internal DVI during two separate phases of inspection is shown in Table 41. Differences in the Table between results noted during the Field Inspection Report ((Phase 1, CLIN 0001d) and this report are shown in bold font. Additionally, this can be seen schematically in Figures 25 (Pre-teardown inspection) and 59 (Field inspection).

During the field inspections, conducted at Victorville, CA in November 2002 under harsh conditions, 172 MFEC indications on 109 fasteners were documented. External LFEC inspection only found 18 of these, while internal detailed visual inspection only noted 34 fastener locations.

During this phase of inspection, 196 indications were noted at 131 fastener sites. However, this phase represents a "lab" environment with controlled conditions as opposed to the harsh desert conditions found during the "field" inspections. There were more fasteners rejected by external LFEC (19) but fewer by internal DVI (32), when compared to the Field Inspection Report (Phase 1, CLIN 0001d).

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As found with the field inspection, the areas which had the most fasteners affected were between BS 720B to BS 720C (14 fasteners) and BS 540 to BS 600 (36 fasteners).

Table 41. Number of indications and fasteners from internal MFEC inspections with comparisons to internal detailed visual and external LFEC sliding probe inspections. Results from both the Field inspection and the Pre-teardown inspection are presented.

Nov. Field Pre-5-10, Inspect. Teardown Report Inspect. Report Stringer/ # MFEC # # # # # # # **Stations MFEC MFEC** LFEC DVI Ind. **MFEC** LFEC DVI Ind. Fast. Fast. Fast. Fast. Fast. Fast. 4L/380-400 4L/400-420 4L/420-440 4R/420-440 4R/440-460 4R/480-500 4R/500-520 4R/520-540 4R/540-560 4R/560-580 4R/580-600 4R/600-620 4R/620-640 4R/640-660 4R/660-680 4R/680-700 4R/700-720 4R/720-720A 4R/720A-720B 4R/720B-720C 4R/720C-720D 4R/720D-720E 4R/720E/720F 4L/950C-950D Totals 

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During MOI of the panels, 22 indications were noted at 18 fasteners, all on the lower row of the longitudinal lap joints. These are shown in Table 42. Many of these areas match the areas of numerous internal MFEC indications when compared to Table 41.

Rivet Check detected indications at 90 fasteners on the lower row of fasteners on the longitudinal lap joints. Only 18 of these fasteners were rejectable. Sixteen of the 90 fasteners contained multiple crack indications. Several indications are believed to be either from the lower edge of the upper skin or oblong holes.

Rivet Check also detected indications at 37 fasteners on the upper row of fasteners on the longitudinal lap joints. Only 11 of these were considered rejectable. One of the 37 fasteners contained multiple crack indications.

C-scan Eddy Current revealed 46 total indications, all but one on the lower row of fasteners on stringer 4R. The area which had the most fasteners affected was between BS 540 to BS 600, similar to the internal MFEC results.

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Table 42. Number of indications and fasteners from MOI, C-scan eddy current, and Rivet Check.

Stringer/	#	#	#	#	#
Stations	MOI	MOI	C-scan	Rivet	Rivet
	Ind.	Fast.	Fast.	Check	Check
				Fast.	Fast.
				(LFEC)	(HFEC)
				Rej/Total	Rej/Total
4L/380-400	2	2	0	0/3	
4L/400-420			0	0/1	
4L/420-440			0	0/2	
4L/560-580			1	0/0	
4L/600-620			0	0/5	
4L/620-640			0	0/0	
4L/640-660			0	1/4	
4L/660-680			0	2/2	
4L/680-700			0	3/6	
4R/480-500	0	0	2	1/1	0/0
4R/500-520	0	0	1	0/3	0/0
4R/520-540	6	4	8	3/8	0/0
4R/540-560	2	2	8	2/5	0/0
4R/560-580	0	0	11	0/2	0/0
4R/580-600	0	0	0	0/0	0/0
4R/600-620	2	2	2	2/4	2/5
4R/620-640	0	0	0	0/5	0/6
4R/640-660	0	0	0	0/3	0/0
4R/660-680	0	0	0	0/5	1/5
4R/680-700	0	0	0	0/0	0/1
4R/700-720	0	0	0	0/1	0/4
4R/720-720A	0	0	10	0/12	6/11
4R/720A-720B	1	1	0	1/6	0/0
4R/720B-720C	5	3	2	2/5	2/3
4R/720C/720D	1	1	1	1/7	0/2
2R-3R/870	1	1			
4L/950C-950D	1	1	0	0/0	0/0
4L/950F-970	1	1	0	0/0	0/0
Totals	22	18	46	18/90	11/37

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## 5.0 REFERENCES

- 1. FAA Contract DTFA03-02-C-00044
- 2. Boeing 727 NDT Manual (D6-48875)
- 3. B727 Supplemental Structural Inspection Document (D6-48040-1)
- 4. B727 Maintenance Planning Document (D6-8766).
- 5. Boeing NDT Standard Practices Manual
- 6. SAIC Company Literature
- 7. BSS D-11805, Inspection of Head Dimensions for Flush Fasteners
- 8. BAC 5004, Installation of Permanent Fasteners
- 9. BAC 5049, Dimpling and Countersinking
- 10. F. Spencer, "Detection Reliability for Small Cracks beneath Rivet Heads Using Eddy Current Nondestructive Inspection Techniques", submitted to FAA Technical Center, 1997.

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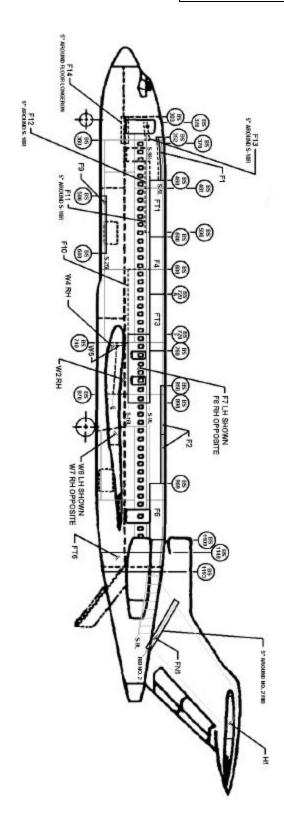


Figure 1. Overview of location of each panel removed from the subject aircraft (Sheet 1 of 2). PROPRIETARY DATA - RESTRICTED DISTRIBUTION - CONTROLLED BY TERMS OF FAA AGREEMENT

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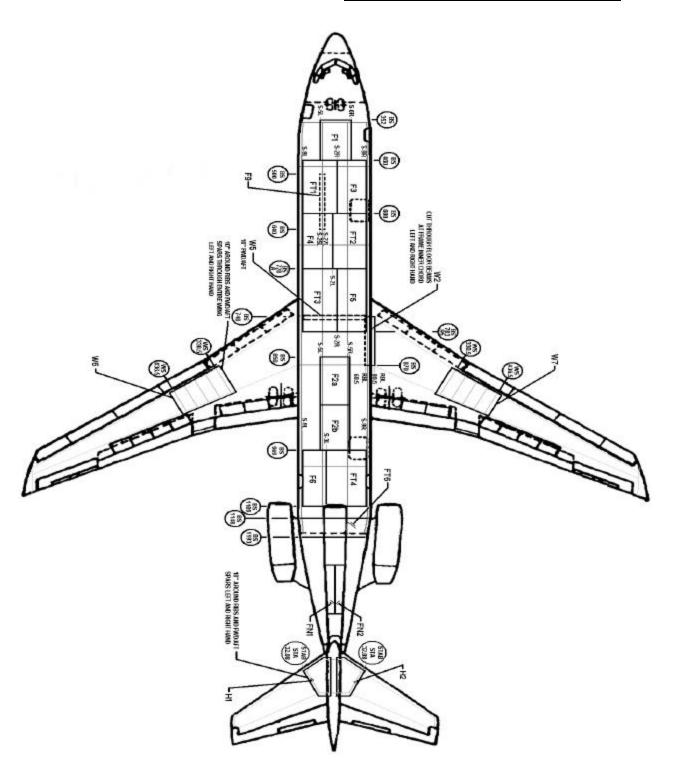


Figure 1. Overview of location of each panel removed from the subject aircraft (Sheet 2 of 2).

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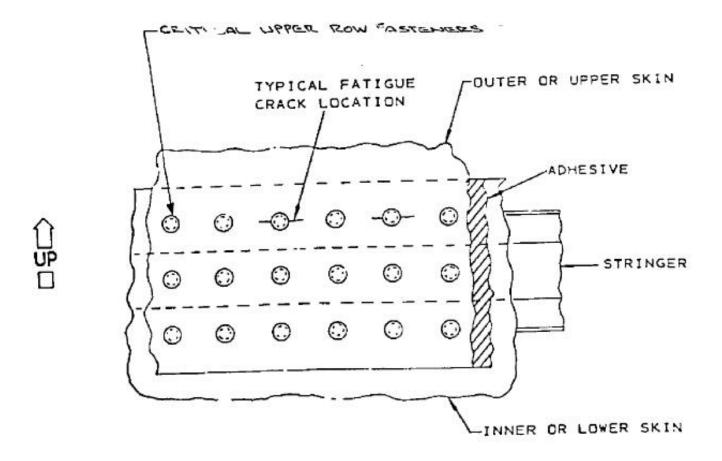


Figure 2. Schematic of typical cracking found in the upper skin, upper row of fasteners of longitudinal lap joints.

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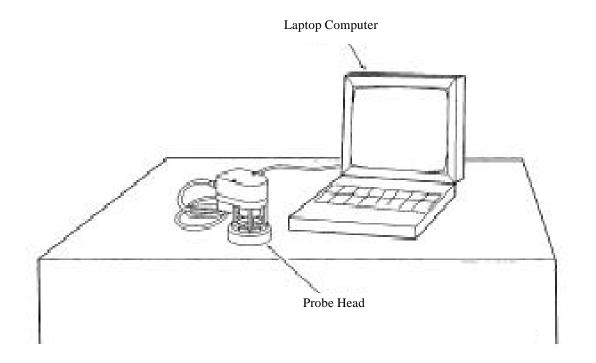


Figure 3. Schematic of the Rivet Check System (NASA Self-nulling probe) consisting of probe head and laptop computer.

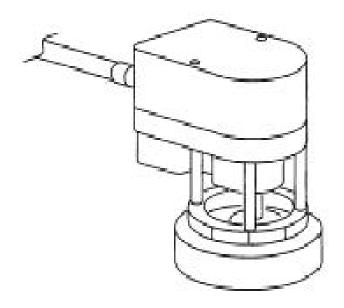
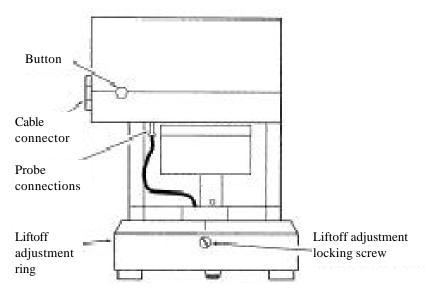
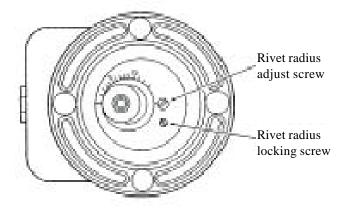


Figure 4. Schematic of the Rivet Check rotating probe head. The rotating probe holds the sensing element, the self-nulling probe, in addition to a drive motor for probe rotation, an angular position sensor, and associated electronics.

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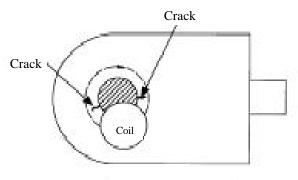
View from side of probe head



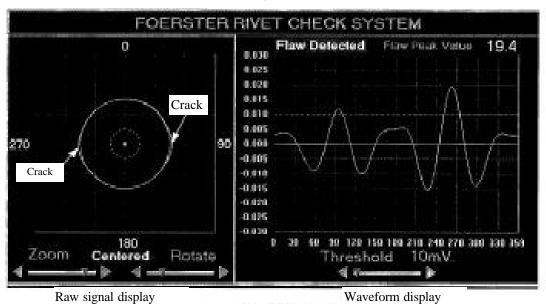
View from Bottom of probe head

Figure 5. Schematic of the Rivet Check rotating probe head, side and bottom views.

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Calibration position View A



Rivet Check active display window View B

Figure 6. Schematic of the Rivet Check rotating probe head position and signal display from a 0.040" long crack at 90 degrees and a 0.050" long crack at 260 degrees.

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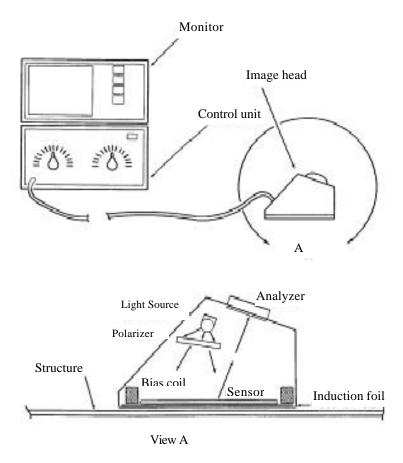


Figure 7. Schematic of Magneto Optical Imaging system consisting of hand-held imaging head and video unit.

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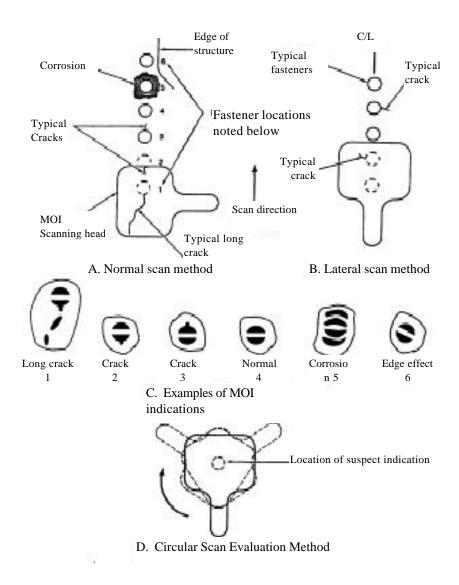


Figure 8. Schematic of some representative signals from the MOI system.

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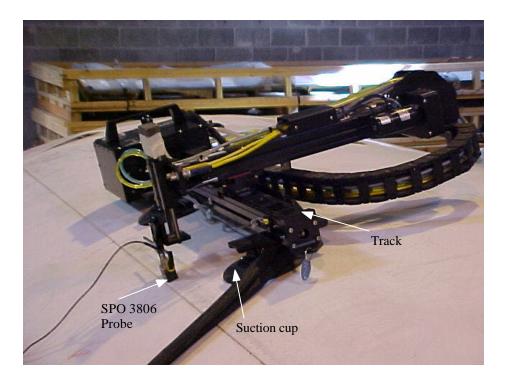


Figure 9a. Photograph of the modified SAIC Ultra Image IV system conducting LFEC inspections on the lower row of lap joints.

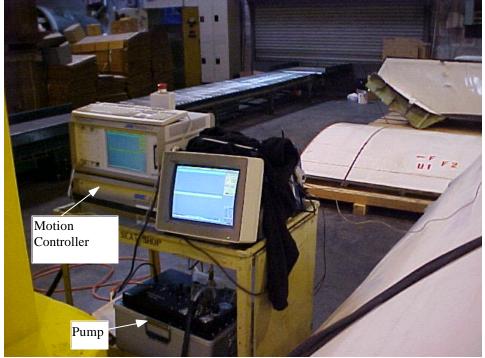


Figure 9b. Photograph of the SAIC Ultra Image IV system including monitor, motion controller, and pump for suction cups.

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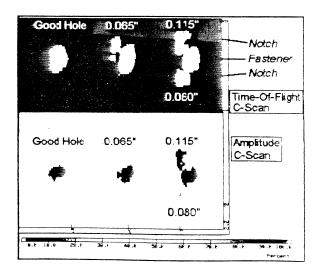
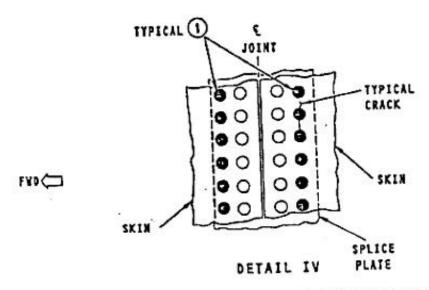
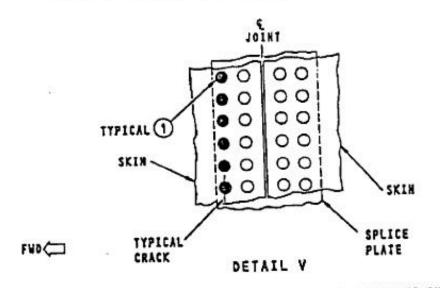


Figure 10. Representative scans from the C-scan Ultra Image IV system (reproduced from SAIC company literature).

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FOUR ROWS SHOWN, NUMBER OF ROWS MAY VARY DEPENDANT ON LOCATION



FOUR ROWS SHOWN, NUMBER OF ROWS MAY VARY DEPENDANT ON LOCATION

Figure 11. Schematic of typical cracking in circumferential butt joints (upper skin, outer row).

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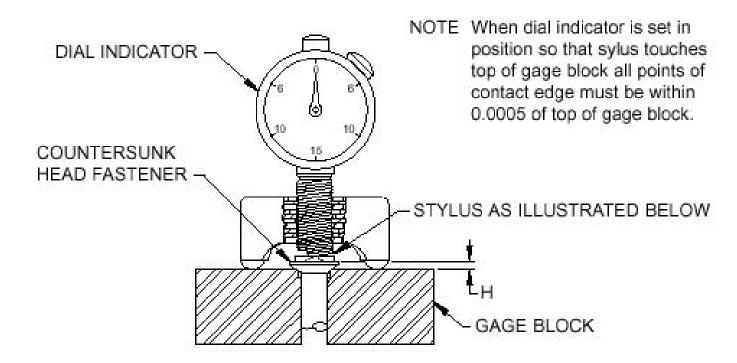


Figure 12. Schematic of flushness measurements via a dial indicator.



Figure 13. Photograph of dial indicator used for flushness measurements.

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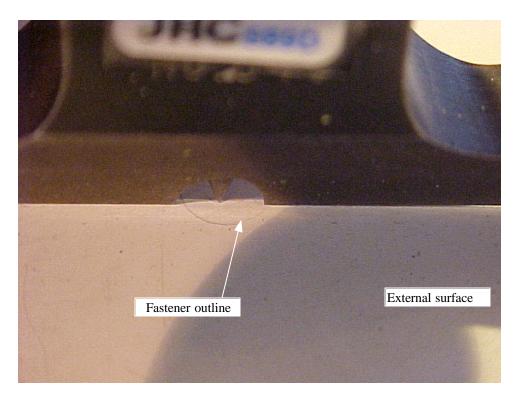


Figure 14. Photograph of close-up view of dial indicator used for flushness measurements.

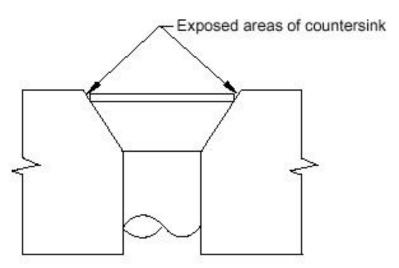


Figure 15. Schematic of "negative" flushness which results in a partially exposed countersink.

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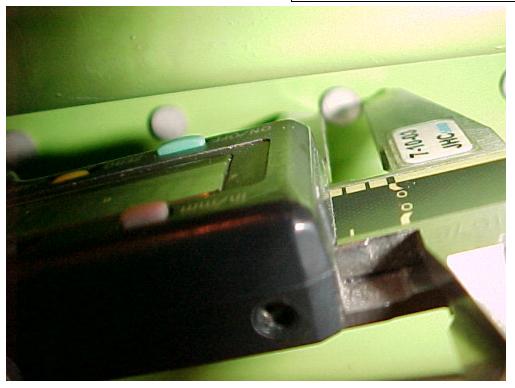


Figure 16. Photograph of digital micrometer used to measure fastener buck-tail diameter.

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Figure 17. Photograph of depth gauge used to measure remaining grip lengths. A digital micrometer was used to measure the resulting protrusions.

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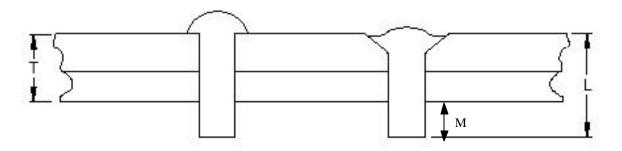


Figure 18. Schematic of remaining grip length (M = L-T) measured, compared to rivet length (L) and total grip or stack-up thickness (T).

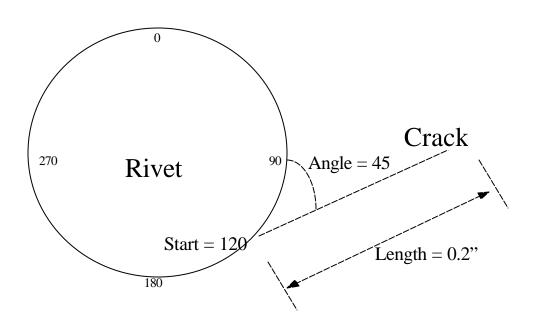


Figure 19. Schematic illustrating crack measurements: crack length, crack start orientation, and crack angle. For example, the crack orientation would be approximately 120 degrees, with a 45 degree crack angle for a length of 0.200".

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Figure 20. Photograph showing general work and storage area of the panels upon arrival in Atlanta and removal of the crate sides and top. Optional program sections can be seen in the background.



Figure 21. Photograph showing panels FT1/F3 (left) and FT3/F5 (right) upon arrival in Atlanta and removal of the crate sides and top.

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Figure 22. Photograph showing panels F1 (foreground), FT4/F6 (right), and FT2/F4 (left) upon arrival in Atlanta and removal of the crate sides and top.



Figure 23. Photograph showing the flap stands which provided access for internal inspections. PROPRIETARY DATA - RESTRICTED DISTRIBUTION - CONTROLLED BY TERMS OF FAA AGREEMENT

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Figure 24. Photograph of internal MFEC being conducted.

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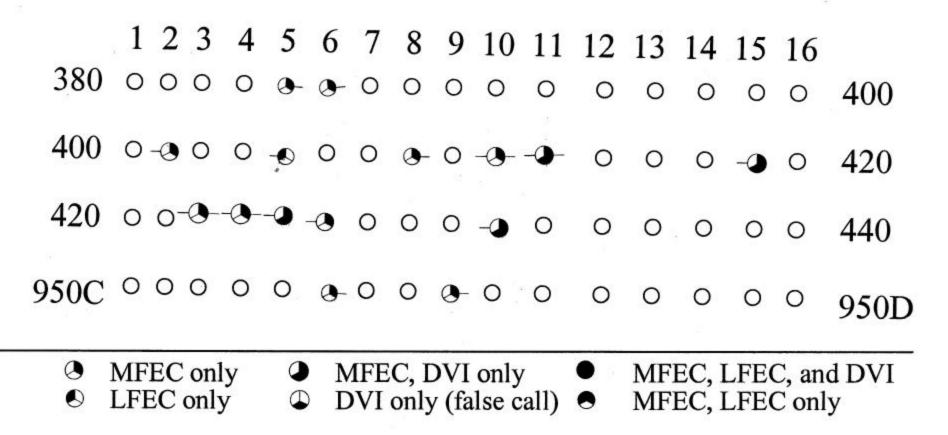
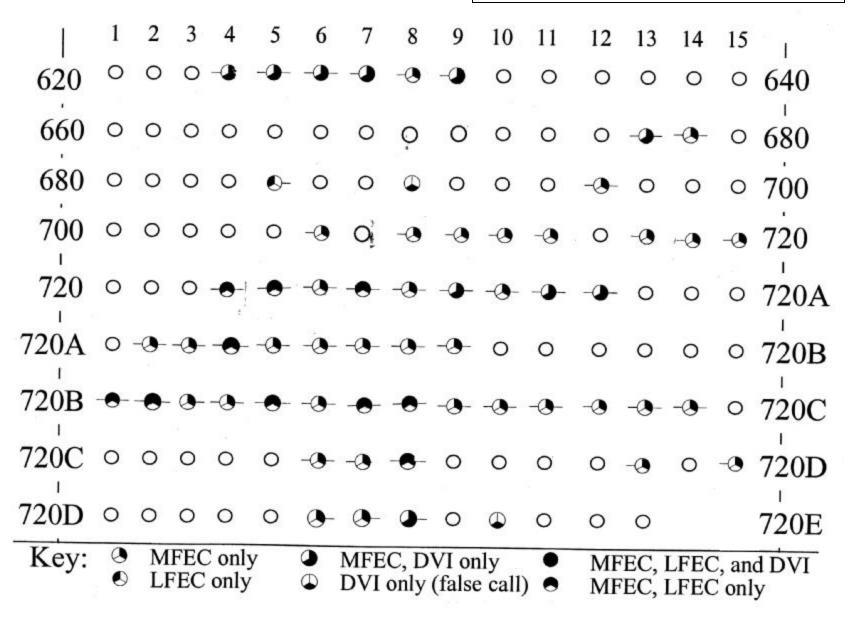


Figure 25a. Schematic of indications found on the lower row of fasteners at stringer 4L during Pre-teardown Inspections.

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Ĭ	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
420	0	0	0	0	0	0	0	0	0	0	3-	0	0	0	0	440
440	0	0	0	0	0	0	0	0	0	-3	0	0	0	0	0	460
480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	500
500	0	0	0	0	0	-@	-3	-3	- <b>3</b> -	-3	-3	-3	0	0	0	520
520	0	0	-👁	0	0	0	0	•	-3-	-0-	•	Φ	-•-	-•-	-	540
540	0	0	-•-	- <b>o</b> -	-9-	-•	- <b>3</b> -	-3-	-0	-3-	-@	-0-	Φ	- <b>o</b> -	Φ	560
560	0	0	<b>3</b>	0	0	-3	-3	<b>3</b> -	<b>3</b> -	<b>-⊗</b> -	-3-	-3-	-	-3-	-3-	580
580	0	0	- <b>3</b> -	-3	-3	-⊘	-3	-3-	-3-	-@-	~	-0-	-3	-3	-3	600
600	0	0	0	0	0	0	0	0	-0-	- <b>3</b> -	-•-	-3-	0	0	0	620
Key:	0			onl		<b>D</b>		EC, D only		nly e call	) •	MI MI	EC,	LFE(	C, an C onl	d DVI y

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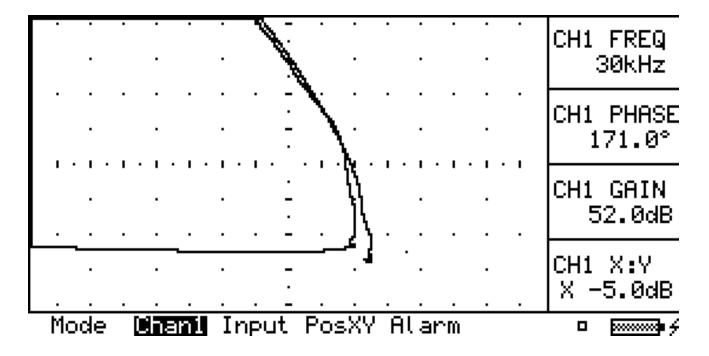
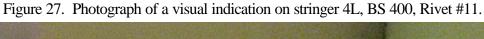


Figure 26. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #7, forward side.





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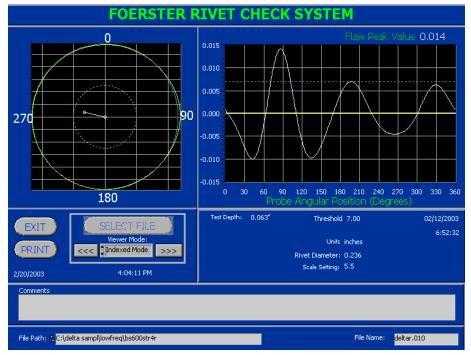


Figure 28. A screen representation of a rejectable indication with Rivet Check.

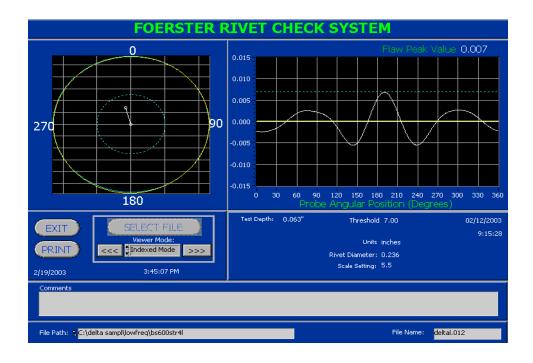


Figure 29. A screen representation of an indication from the lower edge of the upper skin with Rivet Check.

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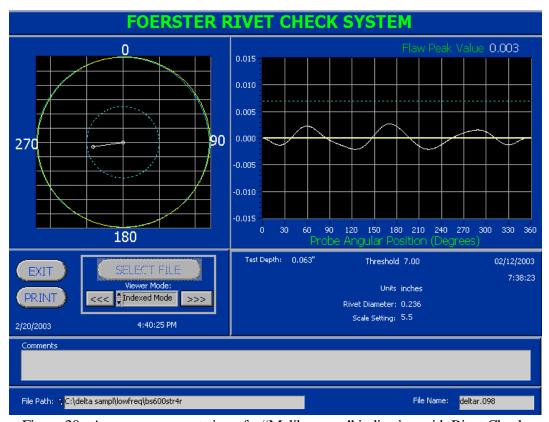


Figure 30. A screen representation of a "Malibu wave" indication with Rivet Check.

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Figure 31. Photograph of Rivet Check inspections.



Figure 32. Photograph of Rivet Check inspection, showing close-up of probe head during inspection.

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Figure 33. Photograph of Rivet Check inspection.



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Figure 34. Photograph showing erratic rivet alignment, making some fasteners uninspectable with Rivet Check.

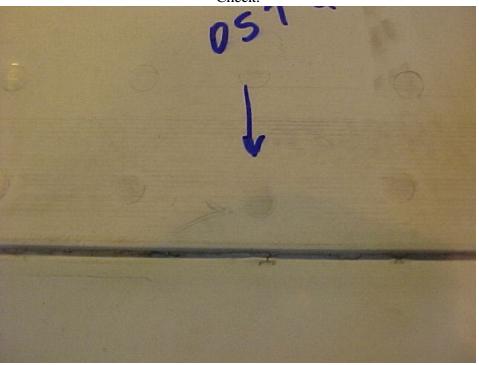


Figure 35. Photograph showing erratic rivet alignment, making some fasteners uninspectable with Rivet Check due to proximity to the edge.



Figure 36. Photograph of ultrasonic tear-strap inspection.

SHEET	103	NO.	4-086624-20
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ISSUE DATE			03/26/2003

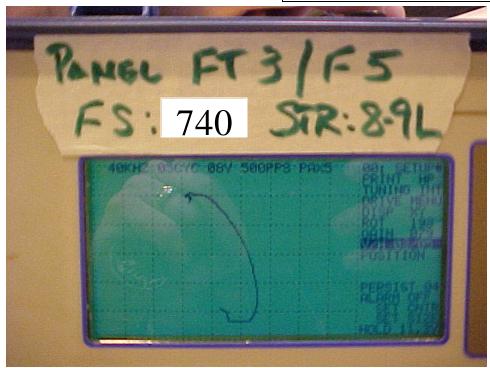


Figure 37. Screen representation of tear strap indication at BS 740 between stringers 3L and 4L.



Figure 38. Photograph of location of tear strap indication at BS 740 between stringers 8L and 9L.

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Figure 39. Photograph showing internal view of tear strap indication area at BS 740 between stringers 8L and 9L. No explanation for the indication could be found.

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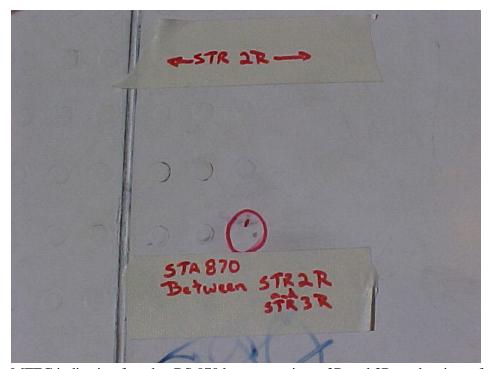


Figure 40. MFEC indication found at BS 870 between stringer 2R and 3R on the circumferential butt joint.



Figure 41. MFEC indication found on the top of the rivet at BS 870 between stringer 2R and 3R on the circumferential butt joint. Mark indicates location of MFEC signal.

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Figure 42. Photograph of external MFEC being conducted.



Figure 43. Photograph of external MFEC being conducted with the circle template.

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Figure 44. Photograph of external MFEC being conducted with the circle template.

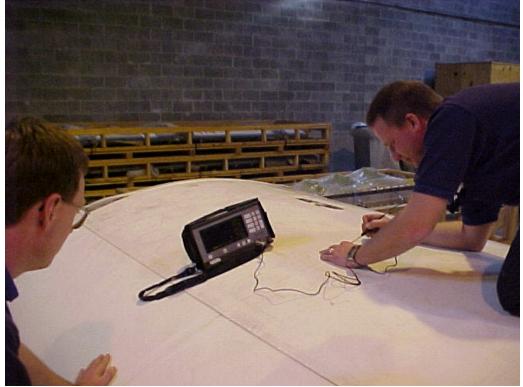


Figure 45. Photograph of external MFEC being conducted with the circle template.

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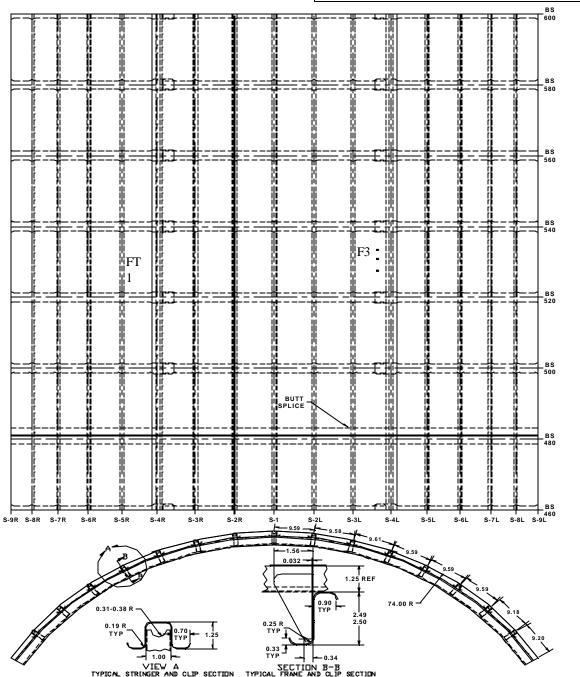


Figure 46. Engineering drawing of panel FT1/F3.

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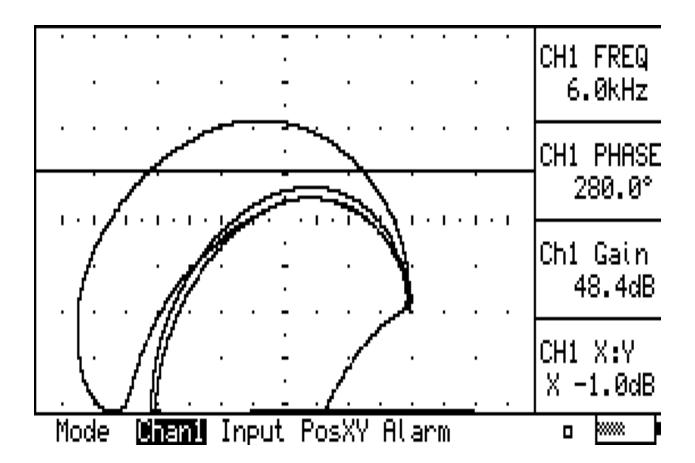


Figure 47. Screen representation of LFEC indication at stringer 4R, FS 520, hole #11, forward side.

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Figure 48. Photograph of MOI inspection using wearable monitor.



Figure 49. Close-up of MOI scanning head inspecting all rows of a longitudinal lap joint.

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Figure 50. MOI indications (6 indications at 4 fasteners) found between BS 520 and BS 540 on the lower row of the longitudinal lap joint at stringer 4R.



Figure 51. Screen representation of MOI indication at rivet #14 between BS 520 and BS 540 on the lower row of the longitudinal lap joint at stringer 4R.

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Figure 52. Photograph of the C-scan Eddy Current inspection being conducted.

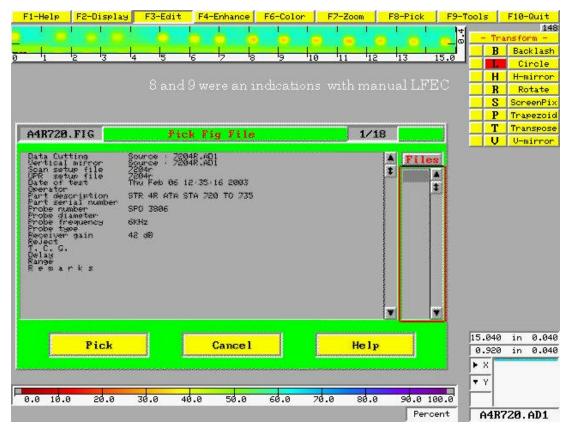
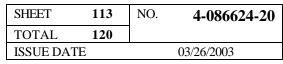


Figure 53a. Screen representations of the signals from C-scan Eddy Current.



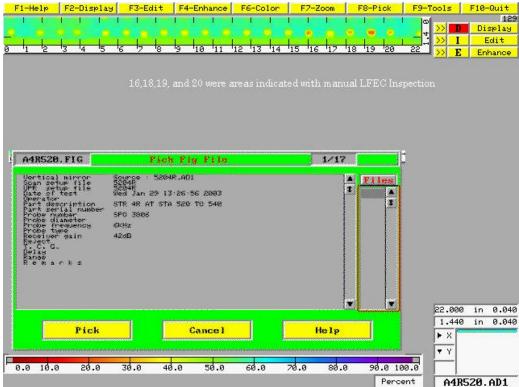


Figure 53b. Screen representation of the signals from C-scan Eddy Current.

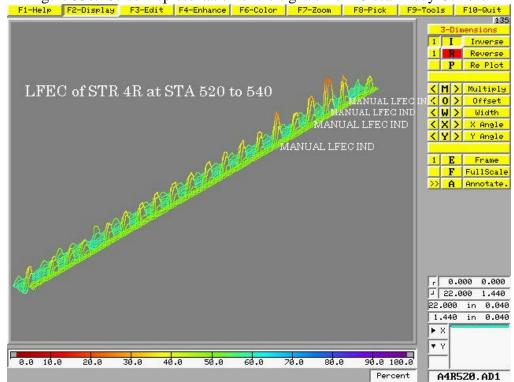


Figure 53c. 3-D Screen representation of the signals from C-scan Eddy Current.

SHEET	114	NO.	4-086624-20
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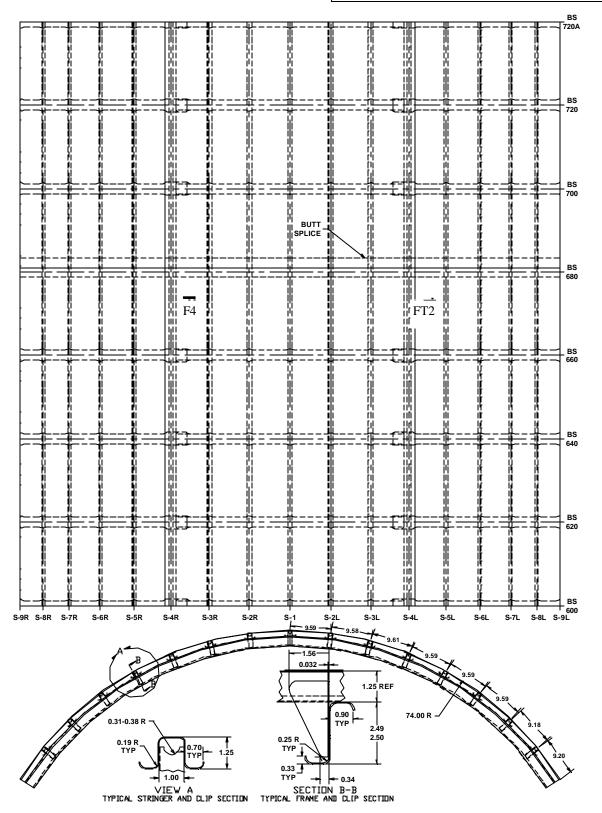


Figure 54. Engineering drawing of panel FT2/F4.

SHEET	115	NO.	4-086624-20
TOTAL	120		
ISSUE DAT	ΓE		03/26/2003

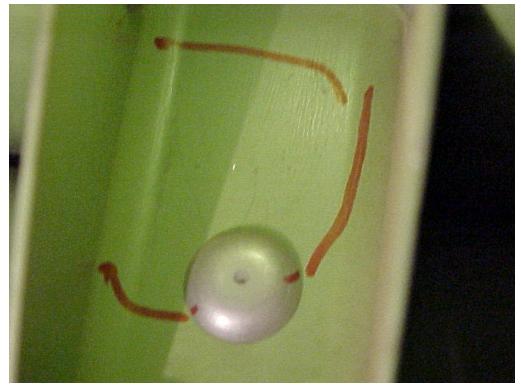


Figure 55. Photograph showing suspected detailed visual indication which was not confirmed via internal HFEC.



Figure 56. Photograph showing replacement stringer clip.

SHEET	116	NO.	4-086624-20
TOTAL	120		
ISSUE DAT	Έ		03/26/2003

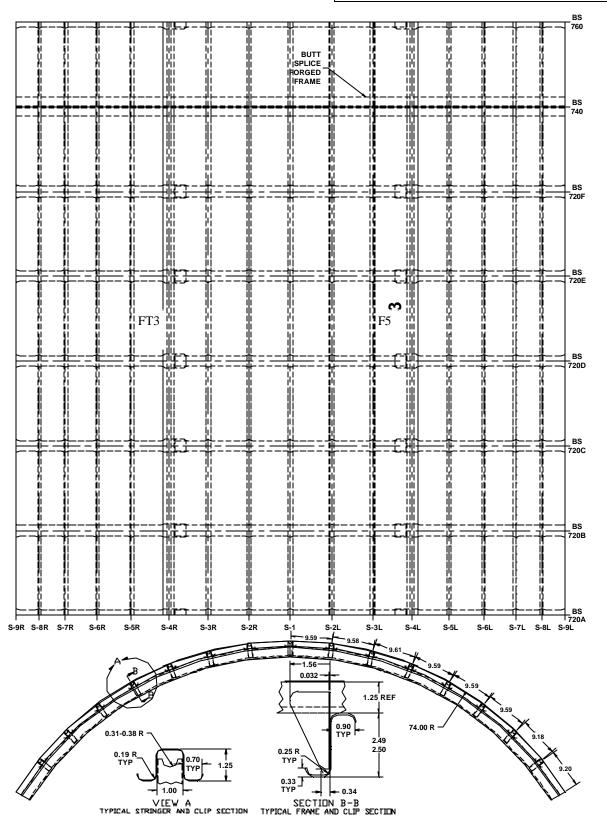


Figure 57. Engineering drawing of panel FT3/F5.

SHEET	117	NO.	4-086624-20
TOTAL	120		
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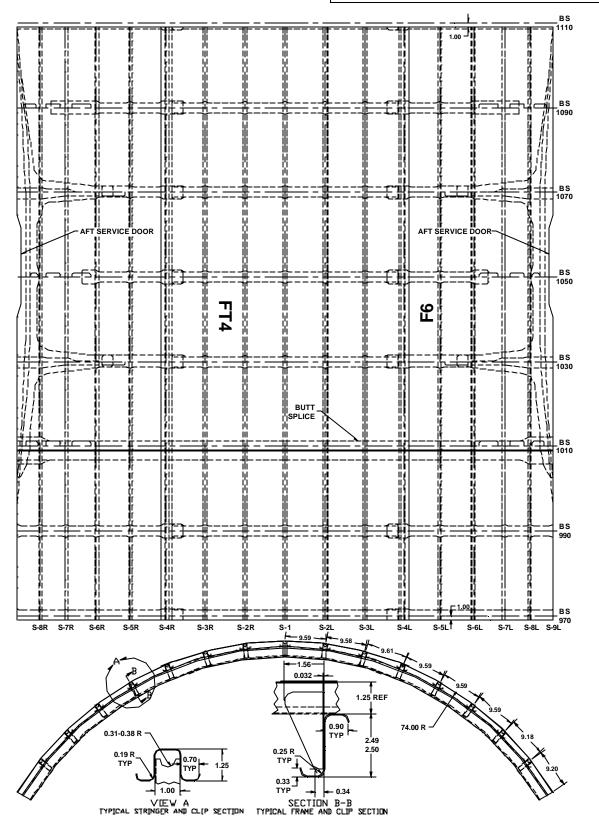


Figure 58. Engineering drawing of panel FT4/F6.

SHEET	118	NO.	4-086624-20
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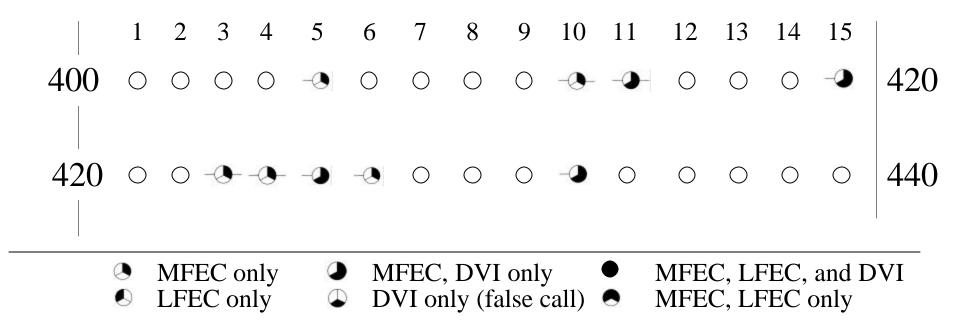


Figure 59a. Schematic of indications found on the lower row of fasteners at stringer 4L during Field Inspections.

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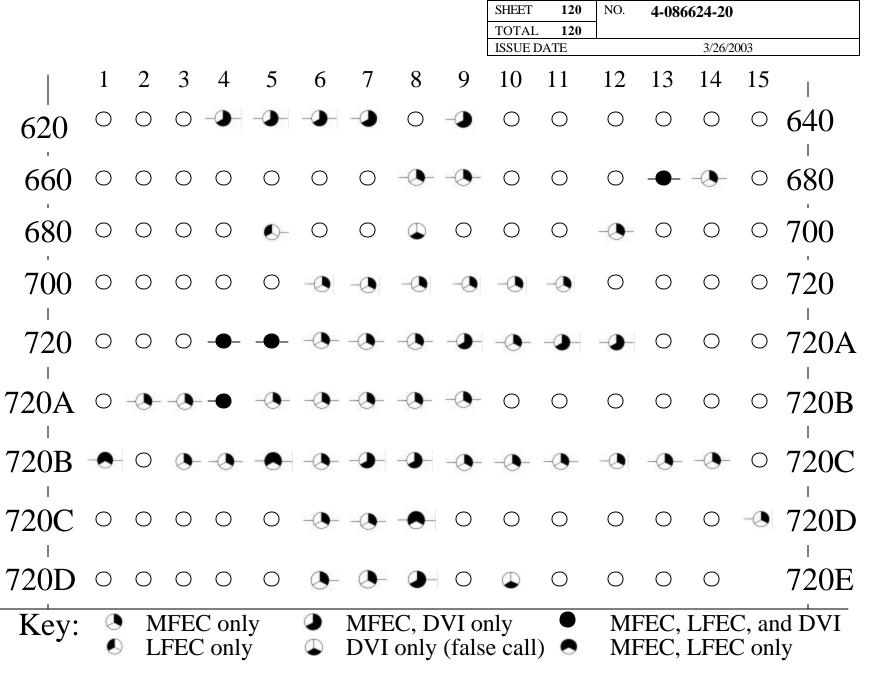
SHEET

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										TOTAL	L 120		. 0000	<b>32.1.2</b> 0		
										ISSUE	DATE			3/26/2	2003	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
420	0	0	0	0	0	0	0	0	0	0	<b>3</b> -	0	0	0	0	440
440	0	0	0	0	0	0	0	0	0	-3	0	0	0	0	0	460
480	<b>O</b> -	-6)	0	0	0	0	0	0	0	0	0	0	0	0	0	500
500	0	0	0	0	0	0	0	0	-3-	-0	-0	0	0	0	0	520
520	0	0	-3	0	0	0	0	•	•	-3-	-	$\oplus$	-	-	•	540
540	0	0	-	-0-	-3-	- <b>3</b> -	-3-	-3-	<b>-</b>	-3-	-0-	<b>O</b> -	•	- <b>3</b> -	•	560
560	0	0	<b>()</b>	0	0	-3	0	<b>O</b> -	<b>O</b> -	-3-	-3	0	0	0	0	580
580	0	0	-3	0	<b>9</b> -	<b>O</b> -	0	-3	-0-	-3-	<b>O</b> -	-@-	-0	-0	0	600
600	0	0	0	0	0	0	0	0	-	-3-	-		-3	0	0	620
Key:	0			C only				EC, D only		nly e call	) •		FEC,			d DVI ly

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# APPENDIX A

# PHOTOGRAPHS OF GENERAL VISUAL INSPECTION AND CONDITION OF THE REMOVED SECTIONS UPON ARRIVAL IN ATLANTA

# **LIST OF FIGURES**

FIGURE A-1	Photograph showing panel F1 after arrival in Atlanta and removal of protective bubble wrap and strapping
FIGURE A-2	Photograph showing custom fabricated skiff which most panels were placed on for transport
FIGURE A-3	Photograph showing panel F2A after arrival in Atlanta and removal of protective bubble wrap and strapping
FIGURE A-4	Photograph showing panel F2B after arrival in Atlanta and removal of protective bubble wrap and strapping
FIGURE A-5	Photograph showing panel FT1/F3 after arrival in Atlanta and removal of the top and sides from the crate
FIGURE A-6	Photograph showing panel FT2/F4 after arrival in Atlanta and removal of the top and sides from the crate
FIGURE A-7	Photograph showing panel FT3/F5 after arrival in Atlanta and removal of the top and sides from the crate
FIGURE A-8	Photograph showing panel FT4/F6 after arrival in Atlanta and removal of the top and sides from the crate
FIGURE A-9	Photograph showing panels FT1/F3 and FT3/F5 after arrival in Atlanta and removal of the top and sides from the crate

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FIGURE A-11 Photograph showing optional program section (1183 bulkhead) in storage A-	-8
FIGURE A-12 Photograph showing optional program sections (window belt, overwing emergency exits, etc.) in storage	-8

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Figure A-1. Photograph showing panel F1 after arrival in Atlanta and removal of protective bubble wrap and strapping.



Figure A-2. Photograph showing custom fabricated skiff which most panels were placed on for transport.

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Figure A-3. Photograph showing panel F2A after arrival in Atlanta and removal of protective bubble wrap and strapping.



Figure A-4. Photograph showing panel F2B after arrival in Atlanta and removal of protective bubble wrap and strapping.

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Figure A-5. Photograph showing panel FT1/F3 after arrival in Atlanta and removal of the top and sides from the crate.



Figure A-6. Photograph showing panel FT2/F4 after arrival in Atlanta and removal of the top and sides from the crate.

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Figure A-7. Photograph showing panel FT3/F5 after arrival in Atlanta and removal of the top and sides from the crate.



Figure A-8. Photograph showing panel FT4/F6 after arrival in Atlanta and removal of the top and sides from the crate.

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Figure A-9. Photograph showing panels FT1/F3 and FT3/F5 after arrival in Atlanta and removal of the top and sides from the crate.



Figure A-10. Photograph showing panels FT2/F4 and FT4/F6 after arrival in Atlanta and removal of the top and sides from the crate.

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Figure A-11. Photograph showing optional program section (1183 bulkhead) in storage.



Figure A-12. Photograph showing optional program sections (window belt, overwing emergency exits, etc.) in storage.

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# APPENDIX B

# SCREEN REPRESENTATIONS OF LFEC INDICATIONS NOTED DURING INSPECTIONS OF LONGITUDINAL LAP SPLICES

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FIGURE B-14 LFEC indication stringer 4R at BS 720A rivet 4 fwd side	B-16

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FIGURE B-19	LFEC indication stringer 4R at BS 720B rivet 8 fwd and aft side	B-21
FIGURE B-20	LFEC indication stringer 4R at BS 720C rivet 8 fwd side	B-22

SHEET	B-3	NO.	4-086624-20
TOTAL	B-22		
ISSUE DATE			03/26/2003

PROBE SN: CODE: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: Low freq 5/32 rivet sliding probe calibration set up SIGNATURE: DATE: 09:38 16 '03 Dump Jan MO Refl 1Ch Probe PR Standard Mode Display DI XY View VW Ch1 6.0kHz 48.4dB 280.0° Ch1 Freq 1F Ch2 Freq 2F 50kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase 1P Ch2 Phase 2P 0.00 Ch1 X:Y 1R X -1.0dB Ch2 X:Y 2R 0.0dB 0.00 SG Sum Phase SP Sum Gain 0.0dB Hi-pass ΗP DC Lo-pass LP 100 Hz 2H X-pos 1 1H 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone Top TA15 Left LA Off Right RA Off Bottom BA Off Inner IA All Off Outer OA 55 2.00 Start SA End EΑ 5.00 Ch1 Y Analogue 1 Out A1 Ch1 X Analogue 2 Out A2 PΕ 1sec Persist Sweep SD 1sec DR +10dB 6.3V 7.00mZMNormal Drive Inp. Gain ΙP +20dB Bal. Load LO Graticule GR Rect.C\_

OPERATOR: 872384 INSTRUMENT SN: 53466

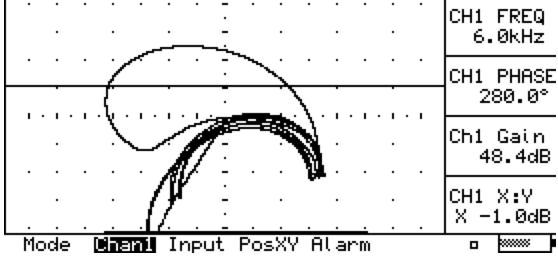


Figure B-1. Screen representation of LFEC calibration on EDM notch at 5/32" fastener.

SHEET	B-4	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	ISSUE DATE		03/26/2003

**8888** 

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC SLIDING PROBE 3/16 FASTENER CALIBRATION SIGNATURE: DATE: 11:10 16 03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 44.9dB 1P 292.0° 1R X -1.0dB SP 0.0° Ch2 Gain 2G
Ch2 Phase 2P
Ch2 X:Y
Sum Gai Ch1 Freq 50kHz Ch1 Gain 40.0dB Ch1 Phase 0.00 Ch1 X:Y Ch2 X:Y ZE Sum Gain SG Lo-pass LP Z-pos 2 2H 0.0dB 0.00 Sum Phase 0.0dB Lo-pass X-pos 2 Y-pos 2 HP DC 100 Hz Hi-pass X-pos 1 1H Y-pos 1 1V 50 1 2V -30 Ω Box Alarm Shape AT Alarm Stretch AS Apply to AA
Alarm action AF Run Both Off Tone TA qoT 15 Left LA Off Off Right RA Bottom BA Off IA All Off Inner Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Sweep SD 1sec
Drive DR +10dB 6.3V
Bal. Load LO -Persist PE 1sec Normal Zoom  $z_{M}$ Inp. Gain +20dB IP Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 292.0° Ch1 Gain 44.9dB CH1 X:Y X -1.0dB Input PosXY

Figure B-2. Screen representation of LFEC calibration on EDM notch at 3/16" fastener.

Mode

Chan1

SHEET	B-5	NO.	4-086624-20
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ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF 4R STA 520+11 FWD SIDE SIGNATURE: DATE: 10: 22 16 '03 Dump Jan Standard Probe MO Refl 1Ch PR Mode Display DI XY View VW Ch1 ch2 Gain 2G Ch2 Phase 2P Ch2 X:Y 2r Sum Gair 

 Ch1 Freq
 1F
 6.0kHz

 Ch1 Gain
 1G
 48.4dB

 Ch1 Phase
 1P
 280.0°

 Ch1 X:Y
 1R
 X -1.0dB

 Sum Phase
 SP
 0.0°

 Hi-pass
 HP
 DC

 50kHz 40.0dB 0.00 Ch2 Finase 2P 0.06
Ch2 X:Y 2R 0.0dB
Sum Gain SG 0.0dB
Lo-pass LP 100 Hz
X-pos 2 2H 1
Y-pos 2 2V 0 X-pos 1 1H 50 Y-pos 1 1V -30 Alarm Shape AT Box Apply to AA
Off Alarm action AF Run Both Alarm Stretch AS Tone TA RA Top 15 Left LA Off Off Right Bottom BA Off IA All Off SA 2.0° Inner Outer OA 55 End Start EA 5.00 Analogue 1 Out Al Ch1 X Analogue 2 Out A2 Ch1 Y Sweep SD 1sec
Drive DR +10dB 6.3V
Bal. Load LO Persist PE 1sec ZM Normal IP Inp. Gain +20dB GR Graticule Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Input PosXY Alarm **|** Mode Chani| 

Figure B-3. Screen representation of LFEC indication at stringer 4R, FS 520, hole #11, forward side.

SHEET	B-6	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 520+13 FWD AND AFT SIDE SIGNATURE: DATE: 10: 25 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB 1F 1G Ch1 Freq Ch2 Freq 2F 50kHz Ch2 Gain Ch2 Phase Ch1 Gain 2G 40.0dB Ch1 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y Ch2 X:Y ZE Sum Gain SG Lo-pass LP Z-POS 2 2H 0.0dB 0.00 SP Sum Phase 0.0dB HP DC 100 Hz Hi-pass Lo-pass X-pos 2 Y-pos 2 1H 1V 50 X-pos 1 1 Y-pos 1 2V -30 0 Box Apply to AA
Alarm action AF Run Alarm Shape AT Both Alarm Stretch AS Off Tone TA RA Top 15 Left LA Off Right Off Bottom BA Off All Off IA Inner Outer OA 55 SA 2.0° Start EΑ 5.0° Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Sweep SD 1sec
Drive DR +10dB 6.3V Persist 1sec Normal Zoom ZM +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Chan1 Input PosXY Alarm **|** 

Figure B-4. Screen representation of LFEC indication at stringer 4R, FS 520, hole #13, forward and aft side.

SHEET	B-7	NO.	4-086624-20
TOTAL	B-22		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 520+14 FWD AND AFT SIDE SIGNATURE: DATE: 10 : 29 16 '03 Dump Jan Probe Refl 1Ch PR Standard Mode MO Display DI XY View VW Ch1 Ch1 Freq 1F 6.0kHz Ch2 Freq 2F 50kHz 48.4dB 1G Ch2 Gain 2G Ch1 Gain 40.0dB 280.00 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -1.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ 15 Left Off Right RA Off Off Bottom BΑ Inner IA All Off Outer OA 55 SA Start 2.00 EΑ 5.00 Analogue 1 Out A1 Ch1 X Analogue 2 Out A2 Ch1 Y Persist 1sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Input PosXY Alarm **|** 

Figure B-5. Screen representation of LFEC indication at stringer 4R, FS 520, hole #14, forward and aft side.

SHEET	B-8	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 520+15 FWD SIDE SIGNATURE: DATE: 10:31 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB SP 0.0° Ch2 Gain 2G
Ch2 Phase 2P
Ch2 X:Y
Sum Gai Ch1 Freq 50kHz Ch1 Gain 40.0dB Chl Phase 0.00 Ch1 X:Y Ch2 X:Y ZE Sum Gain SG Lo-pass LP Z-POS 2 2H 0.0dB ±..∪dB SP 0.0° HP Sum Phase 0.0dB Lo-pass X-pos 2 Y-pos 2 100 Hz Hi-pass 1н 1V 50 X-pos 1 1 Y-pos 1 2V -30 Ω Box Alarm Shape AT Apply to AA
Alarm action AF Run Both Alarm Stretch AS Off Tone TA RA Top 15 Left LA Off Off Right Bottom BA Off All Off IA Inner Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Sweep SD 1sec Drive DR +10dB 6.3V Normal Persist PE 1sec Zoom  $z_{M}$ Inp. Gain +20dB Bal. Load ΙP Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Chan1 Input PosXY Alarm **|** Mode

Figure B-6. Screen representation of LFEC indication at stringer 4R, FS 520, hole #15, forward side.

SHEET	B-9	NO.	4-086624-20
TOTAL	B-22		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 540+3 FWD SIDE SIGNATURE: DATE: 10:33 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB SP 0.0° Ch2 Gain Ch2 Phase Ch2 X:Y Sum Gai Ch1 Freq 50kHz 2F Ch1 Gain 2G 40.0dB Ch1 Phase 2P 0.00 2R Ch1 X:Y Ch2 X:Y ZE Sum Gain SG Lo-pass LP Z-pos 2 2H 0.0dB 0.00 Sum Phase 0.0dB Lo-pass X-pos 2 Y-pos 2 HP DC 100 Hz Hi-pass 1н 1V 50 X-pos 1 1 Y-pos 1 2V -30 0 Box Alarm Shape AT Apply to AA
Alarm action AF Run Both Alarm Stretch AS Off Tone TA RA Top 15 Left LA Off Right Off Bottom BA Off All Off IA Inner Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out Al Analogue 2 Out A2 Ch1 Y Sweep SD 1sec
Drive DR +10dB 6.3V Normal Persist PE 1sec Zoom  $z_{M}$ +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Input PosXY Alarm Chan1 **10000** Mode

Figure B-7. Screen representation of LFEC indication at stringer 4R, FS 540, hole #3, forward side.

SHEET	B-10	NO.	4-086624-20
TOTAL	B-22		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 540+6 FWD AND AFT SIDE SIGNATURE: DATE: 10:45 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB 1F 1G Ch1 Freq Ch2 Freq 2F 50kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.00 SG LP Sum Gain SP Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 1V Y-pos 1 -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top 15 Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.0° Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 1sec Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Normal Zoom ZM +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Input PosXY Alarm Chan1 **|** 

Figure B-8. Screen representation of LFEC indication at stringer 4R, FS 540, hole #6, forward and aft side.

SHEET	B-11	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	ISSUE DATE		03/26/2003

**|** 

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 600+11 FWD SIDE SIGNATURE: DATE: 10:49 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB 1F 1G Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch1 Phase 2P 0.00 Ch2 X:Y Z. Sum Gain SG Ch2 X:Y Ch1 X:Y 0.0dB 0.00 SP Sum Phase 0.0dB HP DC 100 Hz Hi-pass X-pos 2 Y-pos 2 1H 50 2H X-pos 1 1 1V 2V Y-pos 1 -30 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top 15 Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 1sec Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Normal Zoom ZM+20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB

Figure B-9. Screen representation of LFEC indication at stringer 4R, FS 600, hole #11, forward side.

Input PosXY Alarm

Mode

Chani|

SHEET	B-12	NO.	4-086624-20
TOTAL	B-22		
ISSUE DATE			03/26/2003

**\*\*\*\*** 

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 600+9 FWD SIDE SIGNATURE: DATE: 10: 47 16 '03 Dump Jan Probe PR Standard MO Refl 1Ch Mode Display DI XY View VW Ch1 1F Ch1 Freq Ch2 Freq 6.0kHz 2F 50kHz 1G 48.4dB 2G 40.0dB Ch1 Gain Ch2 Gain 1P 280.0° Ch1 Phase Ch2 Phase 2P 0.00 1R X -1.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB Sum Phase SP SG 0.00 Sum Gain 0.0dB HP DC LP 100 Hz Hi-pass Lo-pass 1H 50 2H 1 X-pos 1 X-pos 2 Y-pos 2 Y-pos 1 1V -30 2V 0 Apply to AA Alarm Shape AT Box Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top TA 15 Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.00 5.00 Start End EΑ Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 1sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB

Figure B-10. Screen representation of LFEC indication at stringer 4R, FS 600, hole #9, forward side.

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Input PosXY

Chan1

Mode

SHEET	B-13	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 720+4 AFT SIDE SIGNATURE: DATE: 10:53 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB 1F 1G Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB 0.00 SG LP 2H Sum Gain SP Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 Y-pos 2 1H 50 X-pos 1 1 1V 2V Y-pos 1 -30 0 Alarm Shape AT Box Apply to AA
Alarm action AF Run Both Alarm Stretch AS Off Tone TA Top 15 Left LA Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.0° Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 1sec Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Normal Zoom  $z_{M}$ +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Input PosXY Alarm **|** Mode Chan1

Figure B-11. Screen representation of LFEC indication at stringer 4R, FS 720, hole #4, aft side.

SHEET	B-14	NO.	4-086624-20
TOTAL	B-22		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 720+5 FWD SIDE SIGNATURE: DATE: 10:55 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB SP 0.0° Ch2 Gain 2G
Ch2 Phase 2P
Ch2 X:Y
Sum Gai Ch1 Freq 50kHz Ch1 Gain 40.0dB Ch1 Phase 0.00 Ch1 X:Y Ch2 X:Y ZE Sum Gain SG Lo-pass LP Z-pos 2 2H 0.0dB 0.00 Sum Phase 0.0dB Lo-pass X-pos 2 Y-pos 2 HP DC 100 Hz Hi-pass 1н 1V 50 X-pos 1 1 Y-pos 1 2V -30 Ω Box Alarm Shape AT Apply to AA
Alarm action AF Run Both Alarm Stretch AS Off Tone TA RA Top 15 Left LA Off Right Off Bottom BA Off All Off IA Inner Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Sweep SD 1sec
Drive DR +10dB 6.3V
Bal. Load LO Normal +20dB Persist PE 1sec Zoom  $z_{M}$ Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Input PosXY Alarm **|** Mode Chan1

Figure B-12. Screen representation of LFEC indication at stringer 4R, FS 720, hole #5, forward side.

SHEET	B-15	NO.	4-086624-20
TOTAL	B-22		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 720+7 AFT SIDE SIGNATURE: DATE: 10:56 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB SP 0.0° Ch2 Gain Ch2 Phase Ch2 X:Y Sum Gai Ch1 Freq 50kHz 2F Ch1 Gain 2G 40.0dB Ch1 Phase 2P 0.00 2R Ch1 X:Y Ch2 X:Y ZE Sum Gain SG Lo-pass LP Z-pos 2 2H 0.0dB 0.00 Sum Phase 0.0dB Lo-pass X-pos 2 Y-pos 2 HP DC 100 Hz Hi-pass 1н 1V 50 X-pos 1 1 Y-pos 1 2V -30 Ω Box Alarm Shape AT Apply to AA
Alarm action AF Run Both Alarm Stretch AS Off Tone TA Top 15 Left LA Off Right RA Off Bottom BA Off All Off IA Inner Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Sweep SD 1sec
Drive DR +10dB 6.3V Normal +20dB Persist PE 1sec Zoom  $z_{M}$ Inp. Gain Bal. Load ΙP Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Input PosXY Alarm Chan1 **|** Mode

Figure B-13. Screen representation of LFEC indication at stringer 4R, FS 720, hole #7, aft side.

SHEET	B-16	NO.	4-086624-20
TOTAL	B-22		
ISSUE DATE		03/26/2003	

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LF4R 720A+4 FWD SIGNATURE: DATE: 09:50 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB 1F 1G Ch1 Freq Ch2 Freq 2F 50kHz Ch2 Gain Ch2 Phase Ch1 Gain 2G 40.0dB Chl Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.00 Sum Gain SG LP SP Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 Y-pos 2 1H 50 2H X-pos 1 1 -1V Y-pos 1 2V -30 0 Apply to AA Alarm Shape AT Box Both Alarm action AF Run Alarm Stretch AS Off Tone TA Top 15 Left LA Off

Bottom

Outer

Sweep

Bal. Load

BA

OA

EΑ

Sweep SD 1sec
Drive DR +10dB 6.3V

Analogue 2 Out A2

Off

55

Ch1 Y

5.0°

1sec

INSTRUMENT SN:

OPERATOR:

Right

Inner

Zoom

Inp. Gain

Start

RA

ZM

ΙP

SA

Analogue 1 Out A1

Persist PE

IA

Off

Ch1 X

2.0°

1sec

+20dB

Normal

All Off

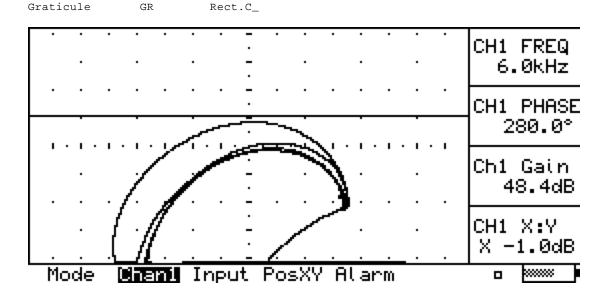


Figure B-14. Screen representation of LFEC indication at stringer 4R, FS 720A, hole #4, forward side.

SHEET	B-17	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	E		03/26/2003

**\*\*\*\*\*** 

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LF 4R 720B+1 FWD SIGNATURE: DATE: 10:02 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB 1F 1G Ch1 Freq Ch2 Freq 2F 50kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.00 SG Sum Gain Sum Phase SP 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone TA LA Top 15 Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 1sec Sweep 1sec sweep Drive Normal DR +10dB 6.3V Zoom ZM+20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB

Figure B-15. Screen representation of LFEC indication at stringer 4R, FS 720B, hole #1, forward side.

Input PosXY Alarm

Mode

SHEET	B-18	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	Έ		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LF 4R 720B+2 F SIGNATURE: DATE: Dump 10 : 04 16 Jan '03 Refl 1Ch Probe PR Standard Mode MO Ch1 Display DI XY View VW 6.0kHz 2F 50kHz Ch1 Freq 1F Ch2 Freq 48.4dB Ch1 Gain 1G 2G Ch2 Gain 40.0dB 280.0° Ch1 Phase 1P 2P Ch2 Phase 0.00 Ch1 X:Y 1R X -1.0dB Ch2 X:Y 2R 0.0dB Sum Phase SP 0.00 Sum Gain SG 0.0dB LP HP Hi-pass DC Lo-pass 100 Hz X-pos 2 1H 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V 2V -30 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone 15 Left LA Off Top ТΑ Right RA Off Bottom BΑ Off Outer Inner IA All Off OA 55 SA Start 2.0° End 5.00 F.Δ Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 1sec SD 1sec Sweep Drive Zoom ZMNormal DR +10dB 6.3V Inp. Gain ΙP +20dB Bal. Load LO Rect.C\_ Graticule GR CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Input PosXY Alarm **\*\*\*\*\*** Mode 

INSTRUMENT SN:

Figure B-16. Screen representation of LFEC indication at stringer 4R, FS 720B, hole #2, forward side.

SHEET	B-19	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	E		03/26/2003

**|** 

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R STA 720B+5 fwd SIDE SIGNATURE: DATE: 10:12 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB 1F 1G Ch1 Freq Ch2 Freq 2F 50kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.00 SG SP Sum Gain Sum Phase 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top 15 Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.0° Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 1sec Drive Sweep 1sec Normal DR +10dB 6.3V Zoom ZM+20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB

Figure B-17. Screen representation of LFEC indication at stringer 4R, FS 720B, hole #5, forward side.

Input PosXY Alarm

Mode

Chan1

SHEET	B-20	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	E		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 720B+7 FWD AND AFT SIDE SIGNATURE: DATE: 10:15 16 03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB SP 0.0° Ch2 Gain 2G
Ch2 Phase 2P
Ch2 X:Y
Sum Gain Ch1 Freq 50kHz Ch1 Gain 40.0dB Chl Phase 0.00 Ch1 X:Y Ch2 X:Y ZE Sum Gain SG Lo-pass LP Z-pos 2 2H 0.0dB 0.00 Sum Phase 0.0dB Lo-pass X-pos 2 Y-pos 2 HP DC 100 Hz Hi-pass 1H 1V 50 X-pos 1 1 Y-pos 1 2V -30 0 Box Alarm Shape AT Apply to AA
Alarm action AF Run Both Alarm Stretch AS Off Tone TA RA Top 15 Left LA Off Right Off Bottom BA Off All Off IA Inner Outer OA 55 SA 2.0° Start EΑ 5.0° Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 1sec Sweep 1sec Sweep SD lsec Drive DR +10dB 6.3V Normal Zoom ZM+20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Chan1 Input PosXY Alarm **|** 

Figure B-18. Screen representation of LFEC indication at stringer 4R, FS 720B, hole #7, forward and aft side.

SHEET	B-21	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	E		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 720B+8 FWD AND AFT SIDE SIGNATURE: DATE: 10:17 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB 1F 1G Ch1 Freq Ch2 Freq 2F 50kHz Ch2 Gain Ch2 Phase Ch1 Gain 2G 40.0dB Ch1 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.00 SG LP 2H Sum Gain SP Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 Y-pos 2 1H 1V 50 X-pos 1 1 Y-pos 1 2V -30 0 Box Apply to AA
Alarm action AF Run Alarm Shape AT Both Alarm Stretch AS Off Tone TA Top 15 Left LA Off Right RA Off Bottom BA Off All Off IA Inner Outer OA 55 SA 2.0° Start EΑ 5.0° Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist PE 1sec Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Normal Zoom  $z_{M}$ +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB Chani Input PosXY Alarm **|** 

INSTRUMENT SN:

Figure B-19. Screen representation of LFEC indication at stringer 4R, FS 720B, hole #8, forward and aft side.

SHEET	B-22	NO.	4-086624-20
TOTAL	B-22		
ISSUE DAT	E		03/26/2003

**|** 

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: LFEC OF STR 4R AT STA 720C+8 FWD SIDE SIGNATURE: DATE: 10:19 16 '03 Dump Jan Probe Standard MO Refl 1Ch PR Mode Display DI XY View VW Ch1 1F 6.0kHz 1G 48.4dB 1P 280.0° 1R X -1.0dB 1F 1G Ch1 Freq Ch2 Freq 2F 50kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.00 SG LP Sum Gain SP Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 2V Y-pos 1 1V -30 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top 15 Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.0° Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 1sec Sweep 1sec Sweep Drive Normal DR +10dB 6.3V Zoom ZM+20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 6.0kHz CH1 PHASE 280.0° Ch1 Gain 48.4dB CH1 X:Y X -1.0dB

Figure B-20. Screen representation of LFEC indication at stringer 4R, FS 720C, hole #8, forward side.

Input PosXY Alarm

Chani|

SHEET	C-1	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

## APPENDIX C

# SCREEN REPRESENTATIONS OF INTERNAL MFEC INDICATIONS NOTED DURING INSPECTIONS OF LONGITUDINAL LAP SPLICES

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SHEET	C-2	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

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SHEET	C-3	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

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FIGURE C-48 MFEC indication at stringer 4R, FS 540, hole #5, aft side	C-59
FIGURE C-49 MFEC indication at stringer 4R, FS 540, hole #6, forward side	C-60
FIGURE C-50 MFEC indication at stringer 4R, FS 540, hole #6, aft side	C-61
FIGURE C-51 MFEC indication at stringer 4R, FS 540, hole #7, forward side	C-62
FIGURE C-52 MFEC indication at stringer 4R, FS 540, hole #7, aft side	C-63

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FIGURE C-53 MFEC indication at stringer 4R, FS 540, hole #8, forward side	C-64
FIGURE C-54 MFEC indication at stringer 4R, FS 540, hole #8, aft side	C-65
FIGURE C-55 MFEC indication at stringer 4R, FS 540, hole #9, forward side	C-66
FIGURE C-56 MFEC indication at stringer 4R, FS 540, hole #10, forward side	C-67
FIGURE C-57 MFEC indication at stringer 4R, FS 540, hole #10, aft side	C-68
FIGURE C-58 MFEC indication at stringer 4R, FS 540, hole #11, forward side	C-69
FIGURE C-59 MFEC indication at stringer 4R, FS 540, hole #12, forward side	
FIGURE C-60 MFEC indication at stringer 4R, FS 540, hole #14, bottom side	C-71
FIGURE C-61 MFEC indication at stringer 4R, FS 560, hole #2, forward side	
FIGURE C-62 MFEC indication at stringer 4R, FS 560, hole #3, aft side	
FIGURE C-63 MFEC indication at stringer 4R, FS 560, hole #6, forward side	
FIGURE C-64 MFEC indication at stringer 4R, FS 560, hole #7, forward side	
FIGURE C-65 MFEC indication at stringer 4R, FS 560, hole #8, aft side	
FIGURE C-66 MFEC indication at stringer 4R, FS 560, hole #9, aft side	
FIGURE C-67 MFEC indication at stringer 4R, FS 560, hole #10, forward side	
FIGURE C-68 MFEC indication at stringer 4R, FS 560, hole #10, aft side	
FIGURE C-69 MFEC indication at stringer 4R, FS 560, hole #11, forward side	C-80
FIGURE C-70 MFEC indication at stringer 4R, FS 560, hole #11, aft side	C-81
FIGURE C-71 MFEC indication at stringer 4R, FS 560, hole #12, forward side	C-82

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FIGURE C-72 MFEC indication at stringer 4R, FS 560, hole #12, aft side	3
FIGURE C-73 MFEC indication at stringer 4R, FS 560, hole #13, forward side	4
FIGURE C-74 MFEC indication at stringer 4R, FS 560, hole #14, forward side	5
FIGURE C-75 MFEC indication at stringer 4R, FS 560, hole #14, aft side	6
FIGURE C-76 MFEC indication at stringer 4R, FS 560, hole #15, forward side	7
FIGURE C-77 MFEC indication at stringer 4R, FS 560, hole #15, aft side	8
FIGURE C-78 MFEC indication at stringer 4R, FS 580, hole #3, forward side	9
FIGURE C-79 MFEC indication at stringer 4R, FS 580, hole #3, aft side	0
FIGURE C-80 MFEC indication at stringer 4R, FS 580, hole #4, forward side	1
FIGURE C-81 MFEC indication at stringer 4R, FS 580, hole #5, forward side	2
FIGURE C-82 MFEC indication at stringer 4R, FS 580, hole #5, aft side	3
FIGURE C-83 MFEC indication at stringer 4R, FS 580, hole #6, forward side	4
FIGURE C-84 MFEC indication at stringer 4R, FS 580, hole #7, forward side	5
FIGURE C-85 MFEC indication at stringer 4R, FS 580, hole #8, forward side	6
FIGURE C-86 MFEC indication at stringer 4R, FS 580, hole #8, bottom side	7
FIGURE C-87 MFEC indication at stringer 4R, FS 580, hole #9, forward side	8
FIGURE C-88 MFEC indication at stringer 4R, FS 580, hole #9, aft side	9
FIGURE C-89 MFEC indication at stringer 4R, FS 580, hole #10, forward side	Ю
FIGURE C-90 MFEC indication at stringer 4R, FS 580, hole #10, aft side	1

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FIGURE C-91 MFEC indication at stringer 4R, FS 580, hole #11, forward side
FIGURE C-92 MFEC indication at stringer 4R, FS 580, hole #12, forward side
FIGURE C-93 MFEC indication at stringer 4R, FS 580, hole #12, aft side
FIGURE C-94 MFEC indication at stringer 4R, FS 580, hole #13, forward side
FIGURE C-95 MFEC indication at stringer 4R, FS 580, hole #14, forward side
FIGURE C-96 MFEC indication at stringer 4R, FS 580, hole #15, forward side
FIGURE C-97 MFEC indication at stringer 4R, FS 600, hole #9, forward side
FIGURE C-98 MFEC indication at stringer 4R, FS 600, hole #9, aft side
FIGURE C-99 MFEC indication at stringer 4R, FS 600, hole #10, forward side
FIGURE C-100 MFEC indication at stringer 4R, FS 600, hole #10, aft side
FIGURE C-101 MFEC indication at stringer 4R, FS 600, hole #11, forward side C-112
FIGURE C-102 MFEC indication at stringer 4R, FS 600, hole #11, aft side
FIGURE C-103 MFEC indication at stringer 4R, FS 600, hole #12, forward side C-114
FIGURE C-104 MFEC indication at stringer 4R, FS 600, hole #12, aft side
FIGURE C-105 MFEC indication at stringer 4R, FS 620, hole #4, forward side
FIGURE C-106 MFEC indication at stringer 4R, FS 620, hole #5, forward side
FIGURE C-107 MFEC indication at stringer 4R, FS 620, hole #5, aft side
FIGURE C-108 MFEC indication at stringer 4R, FS 620, hole #6, forward side
FIGURE C-109 MFEC indication at stringer 4R, FS 620, hole #6, aft side

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FIGURE C-110 MFEC indication at stringer 4R, FS 620, hole #7, forward side
FIGURE C-111 MFEC indication at stringer 4R, FS 620, hole #8, forward side
FIGURE C-112 MFEC indication at stringer 4R, FS 620, hole #9, forward side
FIGURE C-113 MFEC indication at stringer 4R, FS 640, hole #7, forward side
FIGURE C-114 MFEC indication at stringer 4R, FS 640, hole #9, forward side
FIGURE C-115 MFEC indication at stringer 4R, FS 660, hole #14, forward side
FIGURE C-116 MFEC indication at stringer 4R, FS 660, hole #14, aft side
FIGURE C-117 MFEC indication at stringer 4R, FS 660, hole #15, forward side
FIGURE C-118 MFEC indication at stringer 4R, FS 660, hole #15, aft side
FIGURE C-119 MFEC indication at stringer 4R, FS 680, hole #12, forward side
FIGURE C-120 MFEC indication at stringer 4R, FS 680, hole #12, aft side
FIGURE C-121 MFEC indication at stringer 4R, FS 700, hole #6, forward side
FIGURE C-122 MFEC indication at stringer 4R, FS 700, hole #8, forward side
FIGURE C-123 MFEC indication at stringer 4R, FS 700, hole #9, forward side
FIGURE C-124 MFEC indication at stringer 4R, FS 700, hole #10, forward side
FIGURE C-125 MFEC indication at stringer 4R, FS 700, hole #11, forward side
FIGURE C-126 MFEC indication at stringer 4R, FS 700, hole #13, forward side
FIGURE C-127 MFEC indication at stringer 4R, FS 700, hole #14, forward side
FIGURE C-128 MFEC indication at stringer 4R, FS 700, hole #15, forward side

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FIGURE C-129 MFEC indication at stringer 4R, FS 720, hole #4, forward side
FIGURE C-130 MFEC indication at stringer 4R, FS 720, hole #4, aft side
FIGURE C-131 MFEC indication at stringer 4R, FS 720, hole #5, forward side
FIGURE C-132 MFEC indication at stringer 4R, FS 720, hole #5, aft side
FIGURE C-133 MFEC indication at stringer 4R, FS 720, hole #6, forward side
FIGURE C-134 MFEC indication at stringer 4R, FS 720, hole #6, aft side
FIGURE C-135 MFEC indication at stringer 4R, FS 720, hole #7, forward side
FIGURE C-136 MFEC indication at stringer 4R, FS 720, hole #7, aft side
FIGURE C-137 MFEC indication at stringer 4R, FS 720, hole #8, forward side
FIGURE C-138 MFEC indication at stringer 4R, FS 720, hole #8, aft side
FIGURE C-139 MFEC indication at stringer 4R, FS 720, hole #9, forward side
FIGURE C-140 MFEC indication at stringer 4R, FS 720, hole #9, aft side
FIGURE C-141 MFEC indication at stringer 4R, FS 720, hole #10, forward side
FIGURE C-142 MFEC indication at stringer 4R, FS 720, hole #10, aft side
FIGURE C-143 MFEC indication at stringer 4R, FS 720, hole #11, forward side
FIGURE C-144 MFEC indication at stringer 4R, FS 720, hole #11, aft side
FIGURE C-145 MFEC indication at stringer 4R, FS 720, hole #12, forward side
FIGURE C-146 MFEC indication at stringer 4R, FS 720, hole #12, aft side
FIGURE C-147 MFEC indication at stringer 4R, FS 720A, hole #2, forward side

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FIGURE C-148 MFEC indication at stringer 4R, FS 720A, hole #3, forward side
FIGURE C-149 MFEC indication at stringer 4R, FS 720A, hole #3, aft side
FIGURE C-150 MFEC indication at stringer 4R, FS 720A, hole #4, forward side
FIGURE C-151 MFEC indication at stringer 4R, FS 720A, hole #5, forward side
FIGURE C-152 MFEC indication at stringer 4R, FS 720A, hole #5, aft side
FIGURE C-153 MFEC indication at stringer 4R, FS 720A, hole #6, forward side
FIGURE C-154 MFEC indication at stringer 4R, FS 720A, hole #6, aft side
FIGURE C-155 MFEC indication at stringer 4R, FS 720A, hole #7, forward side
FIGURE C-156 MFEC indication at stringer 4R, FS 720A, hole #7, aft side
FIGURE C-157 MFEC indication at stringer 4R, FS 720A, hole #8, forward side
FIGURE C-158 MFEC indication at stringer 4R, FS 720A, hole #8, aft side
FIGURE C-159 MFEC indication at stringer 4R, FS 720A, hole #9, forward side
FIGURE C-160 MFEC indication at stringer 4R, FS 720A, hole #9, aft side
FIGURE C-161 MFEC indication at stringer 4R, FS 720B, hole #1, forward side
FIGURE C-162 MFEC indication at stringer 4R, FS 720B, hole #1, aft side
FIGURE C-163 MFEC indication at stringer 4R, FS 720B, hole #2, forward side
FIGURE C-164 MFEC indication at stringer 4R, FS 720B, hole #3, forward side
FIGURE C-165 MFEC indication at stringer 4R, FS 720B, hole #4, forward side
FIGURE C-166 MFEC indication at stringer 4R, FS 720B, hole #4, aft side

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FIGURE C-167 MFEC indication at stringer 4R, FS 720B, hole #5, forward side
FIGURE C-168 MFEC indication at stringer 4R, FS 720B, hole #5, aft side
FIGURE C-169 MFEC indication at stringer 4R, FS 720B, hole #6, forward side
FIGURE C-170 MFEC indication at stringer 4R, FS 720B, hole #6, aft side
FIGURE C-171 MFEC indication at stringer 4R, FS 720B, hole #7, forward side
FIGURE C-172 MFEC indication at stringer 4R, FS 720B, hole #7, aft side
FIGURE C-173 MFEC indication at stringer 4R, FS 720B, hole #8, forward side
FIGURE C-174 MFEC indication at stringer 4R, FS 720B, hole #8, forward side
FIGURE C-175 MFEC indication at stringer 4R, FS 720B, hole #9, forward side
FIGURE C-176 MFEC indication at stringer 4R, FS 720B, hole #9, aft side
FIGURE C-177 MFEC indication at stringer 4R, FS 720B, hole #10, forward side
FIGURE C-178 MFEC indication at stringer 4R, FS 720B, hole #10, aft side
FIGURE C-179 MFEC indication at stringer 4R, FS 720B, hole #11, forward side
FIGURE C-180 MFEC indication at stringer 4R, FS 720B, hole #11, aft side
FIGURE C-181 MFEC indication at stringer 4R, FS 720B, hole #12, forward side
FIGURE C-182 MFEC indication at stringer 4R, FS 720B, hole #13, forward side
FIGURE C-183 MFEC indication at stringer 4R, FS 720B, hole #13, aft side
FIGURE C-184 MFEC indication at stringer 4R, FS 720B, hole #14, forward side
FIGURE C-185 MFEC indication at stringer 4R, FS 720B, hole #14, aft side

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FIGURE C-186 MFEC indication at stringer 4R, FS 720C, hole #6, forward side
FIGURE C-187 MFEC indication at stringer 4R, FS 720C, hole #6, aft side
FIGURE C-188 MFEC indication at stringer 4R, FS 720C, hole #7, forward side
FIGURE C-189 MFEC indication at stringer 4R, FS 720C, hole #8, forward side
FIGURE C-190 MFEC indication at stringer 4R, FS 720C, hole #8, aft side
FIGURE C-191 MFEC indication at stringer 4R, FS 720C, hole #13, forward side
FIGURE C-192 MFEC indication at stringer 4R, FS 720C, hole #15, forward side
FIGURE C-193 MFEC indication at stringer 4R, FS 720D, hole #6, forward side C-20-
FIGURE C-194 MFEC indication at stringer 4R, FS 720D, hole #7, aft side
FIGURE C-195 MFEC indication at stringer 4R, FS 720D, hole #8, aft side
FIGURE C-196 MFEC indication at stringer 4R, FS 720E, hole #9, forward side
FIGURE C-197 MEEC calibration C-20

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OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 380+6 AFT SIDE SIGNATURE: DATE: 18 : 38 '03 07 Dump Feb Diff 1Ch Probe PR Standard Mode MO Display XY VW Ch1 DI View 1F Ch1 Freq Ch2 Freq 30kHz 50kHz 2 F 1G 54.0dB Ch1 Gain Ch2 Gain 2G 40.0dB 169.0° 1P Ch2 Phase Ch1 Phase 2P 0.00 1R Ch1 X:Y X-11.0dB Ch2 X:Y 2R 0.0dB 0.00 Sum Gain SG Sum Phase SP 0.0dB DC Lo-pass LP 100 Hz Hi-pass HP 2H X-pos 1 1H 40 X-pos 2 0 -32 Y-pos 1 1V Y-pos 2 2V 0 Apply to AA Alarm action AF Run Alarm Shape AT Box Trace 1 Alarm Stretch AS 0.2s Silent TA Top Off Left LA Off rA RA Right Off Bottom BA Off All Off Inner IA Outer OA Off SA 0.00 Start End EΑ Off Analogue 1 Out Al Off Analogue 2 Out A2 Off 0.5sec Persist Sweep 1sec Normal DR +10dB 6.3V Zoom ZMDrive +20dB Bal. Load Inp. Gain ΙP Graticule Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Chan1 Input PosXY Mode 

Figure C-1. Screen representation of MFEC indication at stringer 4L, FS 380, hole #6, aft side.

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CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 380+5 AFT SIDE SIGNATURE: DATE: 18 : 39 0.7 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30kHz 54.0dB 169.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 X-11.0dB 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Silent Alarm Stretch AS 0.2s Left LA Top ТΑ Off Off Right RA Off Bottom BA Off All Off 0.0° Inner IA Outer OA Off SA Start End Off EΑ Off Analogue 2 Out A2 Analogue 1 Out A1 Off 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Rect.C\_ Graticule GR CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chan1 Mode 

INSTRUMENT SN:

Figure C-2. Screen representation of MFEC indication at stringer 4L, FS 380, hole #5, aft side.

SHEET	C-14	NO.	4-086624-20
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OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 400+15 FWD SIDE SIGNATURE: DATE: 18: 27 07 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 54.0dB 169.0° Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-11.0dB Ch2 X:Y 2R Ch1 X:Y 0.0dB SG SP Sum Gain 0.0dB Sum Phase 0.00 LP 2H HP Lo-pass 100 Hz Hi-pass DC 1H 40 X-pos 2 X-pos 1 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Apply to AA Trace 1 Alarm action AF Run Silent Alarm Shape AT Box Alarm Stretch AS 0.2s TA Top Off Left LA Off Right RA Off Bottom BA Off IA All Off SA 0.0° Inner Outer OA Off 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off 0.5sec Persist Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chan1 Mode 

Figure C-3. Screen representation of MFEC indication at stringer 4L, FS 400, hole #15, forward side.

SHEET	C-15	NO.	4-086624-20
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CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 400+11 AFT SIDE SIGNATURE: DATE: 18 : 30 0.7 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30kHz 54.0dB 169.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 X-11.0dB 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Silent Alarm Stretch AS 0.2s LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ Inner IA All Off Outer OA Off 0.00 SA Start Off EΑ Off Analogue 2 Out A2 Analogue 1 Out A1 Off 0.5sec Persist Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chan1 Mode 

INSTRUMENT SN:

Figure C-4. Screen representation of MFEC indication at stringer 4L, FS 400, hole #11, aft side.

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TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 400+11 FWD SIDE SIGNATURE: DATE: 18 : 31 0.7 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 54.0dB 169.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X-11.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Silent Alarm Stretch AS 0.2s LA Top ТΑ Off Left Off Right RA Off Bottom BA Off Inner IA All Off Outer OA Off SA 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Rect.C\_ Graticule GR CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Mode Chani 

Figure C-5. Screen representation of MFEC indication at stringer 4L, FS 400, hole #11, forward side.

SHEET	C-17	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 400+10 AFT SIDE SIGNATURE: DATE: 18: 32 07 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30kHz 54.0dB 169.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 X-11.0dB 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Silent Alarm Stretch AS 0.2s LA Top ТΑ Off Left Off Right RA Off Bottom BA Off Inner IA All Off Outer OA Off SA 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Rect.C\_ Graticule GR CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB PosXY Chani Input 

INSTRUMENT SN:

Figure C-6. Screen representation of MFEC indication at stringer 4L, FS 400, hole #10, aft side.

SHEET	C-18	NO.	4-086624-20
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ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 400+10 FWD SIDE SIGNATURE: DATE: 18:33 07 '03 Dump Feb Diff 1Ch Probe MO PR Standard Mode Display DI XY View VW Ch1 Ch1 Freq Ch2 Freq 1 F 30kHz 2F 50kHz 1G 54.0dB 2G Ch1 Gain Ch2 Gain 40.0dB 169.0° Ch1 Phase 1P Ch2 Phase 2P 0.00 1R Ch1 X:Y X-11.0dB Ch2 X:Y 2R 0.0dB Sum Phase SP 0.00 Sum Gain SG 0.0dB 100 Hz Hi-pass HP DC Lo-pass LP 1H 2H 0 X-pos 1 40 X-pos 2 Y-pos 1 1V -32 Y-pos 2 2V 0 Alarm Shape AT Apply to AA Box Trace 1 Alarm Stretch AS Alarm action AF Run 0.2s Silent LA Top TA Off Left Off Right Off BA Off RΑ Bottom Inner IA All Off Outer OA Off 0.00 Start SA End EΑ Off Analogue 1 Out A1 Off Analogue 2 Out A2 Off Persist 0.5sec Sweep 1sec Normal Drive DR +10dB 6.3V Zoom ZM+20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Mode Chan1 

INSTRUMENT SN:

Figure C-7. Screen representation of MFEC indication at stringer 4L, FS 400, hole #10, forward side.

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ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 400+8 AFT SIDE SIGNATURE: DATE: 18: 34 07 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 30kHz 54.0dB 169.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 X-11.0dB 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H 40 X-pos 2 2H X-pos 1 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Silent Alarm Stretch AS 0.2s Top ТΑ Off Left LA Off Right RA Off Bottom BA Off IA All Off SA 0.0° Inner Outer OA Off SA Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off 0.5sec Persist Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chan1 

Figure C-8. Screen representation of MFEC indication at stringer 4L, FS 400, hole #8, aft side.

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TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 400+5 FWD SIDE SIGNATURE: DATE: 18:36 07 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 54.0dB 169.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Apply to AA Trace 1 Alarm action AF Run Silent Alarm Shape AT Box Alarm Stretch AS 0.2s Top ТΑ Off Left LA Off Right RA Off Bottom BA Off IA All Off SA 0.0° Inner Outer OA Off SA 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chan1 

Figure C-9. Screen representation of MFEC indication at stringer 4L, FS 400, hole #5, forward side.

SHEET	C-21	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 400+2 FWD SIDE SIGNATURE: DATE: 18 : 37 0.7 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 54.0ab 169.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-11.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG Sum Phase 0.00 0.0dB HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 40 0 Y-pos 1 1V -32 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Alarm Stretch AS 0.2s Silent LA Top ТΑ Off Left Off Right RA Off Off Bottom BΑ IA Inner All Off Outer OA Off SA 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out Al Off Persist 0.5sec Sweep 1sec DR +10dB 6.3V Zoom ZMNormal Drive +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chani Mode 

Figure C-10. Screen representation of MFEC indication at stringer 4L, FS 400, hole #2, forward side.

SHEET	C-22	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 420+10 FWD SIDE SIGNATURE: DATE: 18: 17 0.7 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 Ch1 Freq 54.0dB 169.0° 50kHz 1F 30kHz Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X-11.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG Sum Phase 0.00 0.0dB HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Silent Alarm Stretch AS 0.2s LA Top ТΑ Off Left Off Right RA Off Off Bottom BΑ Inner IA All Off Outer OA Off SA 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out Al Off Persist 0.5sec Sweep 1sec Normal DR +10dB 6.3V Zoom ZMDrive +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chan1 Mode 

INSTRUMENT SN:

Figure C-11. Screen representation of MFEC indication at stringer 4L, FS 420, hole #10, forward side.

SHEET	C-23	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 420+6 FWD SIDE SIGNATURE: DATE: 18 : 19 0.7 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 54.0dB 169.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Silent Alarm Stretch AS 0.2s LA Top ТΑ Off Left Off Right RA Off Bottom BA Off Inner IA All Off Outer OA Off SA 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chani 

Figure C-12. Screen representation of MFEC indication at stringer 4L, FS 420, hole #6, forward side.

SHEET	C-24	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 420+5 FWD SIDE SIGNATURE: DATE: 18 : 21 07 '03 Dump Feb Diff 1Ch Probe MO PR Standard Mode Display DI XY View VW Ch1 Ch1 Freq Ch2 Freq 1 F 30kHz 2F 50kHz 1G 54.0dB Ch2 Gain 2G Ch1 Gain 40.0dB 169.0° Ch1 Phase 1P Ch2 Phase 2P 0.00 1R Ch1 X:Y X-11.0dB Ch2 X:Y 2R 0.0dB Sum Phase SP 0.00 Sum Gain SG 0.0dB HP LP 100 Hz Hi-pass DC Lo-pass 1H 2H 0 X-pos 1 40 X-pos 2 Y-pos 1 1V -32 Y-pos 2 2V 0 Alarm Shape AT Apply to AA Box Trace 1 Alarm Stretch AS Alarm action AF Run 0.2s Silent LA Top TA Off Left Off Right RA Off BA Off Bottom Inner IA All Off Outer OA Off 0.00 Start SA End EΑ Off Analogue 1 Out Al Off Analogue 2 Out A2 Off Persist 0.5sec Sweep 1sec Normal Drive DR +10dB 6.3V Zoom  $z_{M}$ +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Mode 

INSTRUMENT SN:

Figure C-13. Screen representation of MFEC indication at stringer 4L, FS 420, hole #5, forward side.

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SHEET	C-25	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 420+4 AFT SIDE SIGNATURE: DATE: 18 : 22 0.7 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30KB2 54.0dB 169.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X-11.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Lo-pass 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Silent Alarm Stretch AS 0.2s Top ТΑ Off Left LA Off Right RA Off Bottom BA Off Inner IA All Off Outer OA Off SA 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 0.5sec Sweep 1sec Drive Normal DR +10dB 6.3V Zoom zM+20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chan1 Mode 

Figure C-14. Screen representation of MFEC indication at stringer 4L, FS 420, hole #4, aft side.

SHEET	C-26	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 420+4 FWD SIDE SIGNATURE: DATE: 18: 24 07 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 30kHz 54.0dB 169.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-11.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Apply to AA Trace 1 Alarm action AF Run Silent Alarm Shape AT Box Alarm Stretch AS 0.2s TA Top Off Left LA Off Right RA Off Bottom BA Off IA All Off SA 0.0° Inner Outer OA Off SA 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off 0.5sec Persist Sweep 1sec Drive Normal DR +10dB 6.3V Zoom ZM+20dB Inp. Gain ΙP Bal. Load Rect.C\_ Graticule GR CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Mode 

Figure C-15. Screen representation of MFEC indication at stringer 4L, FS 420, hole #4, forward side.

SHEET	C-27	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 420+3 AFT SIDE SIGNATURE: DATE: 18: 25 07 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 54.0dB 1P 169.0° 1R X-11.0dB 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB SP 0.00 Sum Gain SG 0.0dB Sum Phase LP 2H HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 40 X-pos 1 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Apply to AA Trace 1 Alarm action AF Run Silent Alarm Shape AT Box Alarm Stretch AS 0.2s Top ТΑ Off Left LA Off Right RA Off Bottom BA Off IA All Off SA 0.0° Inner Outer OA Off SA Start EΑ Off Off Analogue 1 Out A1 Analogue 2 Out A2 Off 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chan1 

INSTRUMENT SN:

Figure C-16. Screen representation of MFEC indication at stringer 4L, FS 420, hole #3, aft side.

SHEET	C-28	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 420+3 FWD SIDE SIGNATURE: DATE: 18: 26 07 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 54.0dB 169.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Apply to AA Trace 1 Alarm action AF Run Silent Alarm Shape AT Box Alarm Stretch AS 0.2s Top ТΑ Off Left LA Off Right RA Off Bottom BA Off IA Inner All Off Outer OA Off SA 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off 0.5sec Persist Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Mode Chan1 

Figure C-17. Screen representation of MFEC indication at stringer 4L, FS 420, hole #3, forward side.

SHEET	C-29	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE		•	03/26/2003

INSTRUMENT SN: OPERATOR: CODE: PROBE SN: CAL BLOCK SN: LOCATION: JOB NAME: MFEC OF STR 4L AT STA 950C+9 AFT SIDE TEST COMMENTS: SIGNATURE: DATE: 15 : 23 14 '03 Dump Feb Probe PR Standard Mode MO Diff 1Ch Display DΤ XY View WV Ch1 100kHz Ch1 Freq 1F 30kHz Ch2 Freq 2F 53.0dB 40.0dB Ch1 Gain 1G Ch2 Gain 2G Ch1 Phase 1P 169.0° Ch2 Phase 2P 0.00 Ch1 X:Y X-10.0dB Ch2 X:Y 0.0dB 1R 2R Sum Phase 0.00 0.0dB SP Sum Gain SG Hi-pass DC 100 Hz ΗP Lo-pass LP X-pos 1 65 1H X-pos 2 0 Y-pos 1 -35 Y-pos 2 0 Alarm Shape Off Apply to AA Alarm Stretch AS Off Alarm action AF Run Silent -14 Left Off LARight Off Bottom BA Off Inner IA 20 Outer OA Off 315.0° Start 9.00 EΑ Analogue 1 Out A1 Off Analogue 2 Out A2 Off Persist PΕ 5sec Sweep SD 1sec Zoom ZMNormal Drive DR +10dB 6.3V Inp. Gain ΙP +20dB Bal. Load LO Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Marnu** Input PosXY Mode

Figure C-18. Screen representation of MFEC indication at stringer 4L, FS 950C, hole #9, aft side. PROPRIETARY DATA - RESTRICTED DISTRIBUTION - CONTROLLED BY TERMS OF FAA AGREEMENT

SHEET	C-30	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4L AT STA 950F+6 AFT SIDE SIGNATURE: DATE: 15: 19 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB 2F 1F 1G Ch1 Freq Ch2 Freq 100kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB 0.00 SG LP 2H Sum Gain SP Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H X-pos 1 65 0 1V X-pos 2 Y-pos 2 Y-pos 1 2V -35 0 Off Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS TA Top -14 Left LA Off Right RA Off Bottom BA Off 20 Outer Inner IA OA Off 9.0° Off SA Start End EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep SD 1sec Sweep Drive DR +10dB 6.3V Zoom ZM Normal Inp. Gain +20dB Bal. Load ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chanl** Input PosXY Mode

Figure C-19. Screen representation of MFEC indication at stringer 4L, FS 950C, hole #6, aft side.

SHEET	C-31	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 420+11 AFT SIDE SIGNATURE: DATE: 18:40 07 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 54.0dB 169.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Silent Alarm Stretch AS 0.2s Top ТΑ Off Left LA Off Right RA Off Bottom BA Off Inner IA All Off Outer OA Off SA 0.00 Start Off EΑ Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Rect.C\_ Graticule GR CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chan1 

Figure C-20. Screen representation of MFEC indication at stringer 4R, FS 420, hole #11, aft side.

SHEET	C-32	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 440+10 FWD SIDE SIGNATURE: DATE: 18:43 07 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 54.0dB 169.0° Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-11.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SG Sum Phase SP 0.00 Sum Gain 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Apply to AA Trace 1 Alarm action AF Run Silent Alarm Shape AT Box Alarm Stretch AS 0.2s TA Top Off Left LA Off Right RA Off Bottom BA Off IA All Off SA 0.0° Inner Outer OA Off SA 0.00 Start EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off 0.5sec Persist Sweep 1sec Drive Normal DR +10dB 6.3V Zoom ZM+20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB **Chanl** Input PosXY 

INSTRUMENT SN:

Figure C-21. Screen representation of MFEC indication at stringer 4R, FS 440, hole #10, forward side.

SHEET	C-33	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 500+6 FWD SIDE SIGNATURE: DATE: 23:12 04 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 **\*\*\*\*** Mode

Figure C-22. Screen representation of MFEC indication at stringer 4R, FS 500, hole #6, forward side.

SHEET	C-34	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE		•	03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 500+7 FWD SIDE SIGNATURE: DATE: 23 : 10 0.4 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 Ch1 Freq 50kHz 1F 30kHz Ch2 Freq 2F 52.0dB Ch1 Gain 1G 40.0dB Ch2 Gain 2G 171.00 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP SG 0.0dB Sum Phase 0.00 Sum Gain HP LP Hi-pass DC 100 Hz Lo-pass 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone Top ТΑ Off Left T.A Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out Al Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Mode Chan1 **|** 

Figure C-23. Screen representation of MFEC indication at stringer 4R, FS 500, hole #7, forward side.

SHEET	C-35	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 500+8 FWD SIDE SIGNATURE: DATE: 23: 23 04 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0ab 171.0° 10.0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Top ТΑ Off Left T.A Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out Al Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec DR +10dB 6.3V Zoom ZMNormal Drive +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY **\*\*\*** 

Figure C-24. Screen representation of MFEC indication at stringer 4R, FS 500, hole #8, forward side.

SHEET	C-36	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 500+9 FWD SIDE SIGNATURE: DATE: 23: 24 04 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° ~-10.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 **\*\*\*** Mode

Figure C-25. Screen representation of MFEC indication at stringer 4R, FS 500, hole #9, forward side.

SHEET	C-37	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 500+9 AFT SIDE SIGNATURE: DATE: 23:30 04 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY **\*\*\*** Mode Chan1

Figure C-26. Screen representation of MFEC indication at stringer 4R, FS 500, hole #9, aft side.

SHEET	C-38	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 500+10 FWD SIDE SIGNATURE: DATE: 23: 31 04 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 **\*\*\*** Mode

INSTRUMENT SN:

Figure C-27. Screen representation of MFEC indication at stringer 4R, FS 500, hole #10, forward side.

SHEET	C-39	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 500+11 FWD SIDE SIGNATURE: DATE: 23: 32 04 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 1F Ch2 Freq 2F 50kHz Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 **\*\*\*** 

Figure C-28. Screen representation of MFEC indication at stringer 4R, FS 500, hole #11, forward side.

SHEET	C-40	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 500+12 FWD SIDE SIGNATURE: DATE: 23: 35 04 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 30kHz 52.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec DR +10dB 6.3V Zoom ZMNormal Drive +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY **\*\*\*** 

Figure C-29. Screen representation of MFEC indication at stringer 4R, FS 500, hole #12, forward side.

SHEET	C-41	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+3 FWD SIDE SIGNATURE: DATE: 23:36 04 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chani **\*\*\*** 

Figure C-30. Screen representation of MFEC indication at stringer 4R, FS 520, hole #3, forward side.

SHEET	C-42	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+9 FWD SIDE SIGNATURE: DATE: 23: 42 04 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X-10.0dB 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SG SP Sum Gain 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BA All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive Zoom ZMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 **\*\*\*** Mode

Figure C-31. Screen representation of MFEC indication at stringer 4R, FS 520, hole #9, forward side.

SHEET	C-43	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+9 AFT SIDE SIGNATURE: DATE: 23:44 04 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30Km2 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 **\*\*\*** Mode

INSTRUMENT SN:

Figure C-32. Screen representation of MFEC indication at stringer 4R, FS 520, hole #9, aft side.

SHEET	C-44	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+8 AFT SIDE SIGNATURE: DATE: 23: 45 04 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain IP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 **\*\*\*** Mode

INSTRUMENT SN:

Figure C-33. Screen representation of MFEC indication at stringer 4R, FS 520, hole #8, aft side.

SHEET	C-45	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+10 FWD SIDE SIGNATURE: DATE: 23 : 51 04 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0aL 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP SG Sum Phase 0.00 Sum Gain 0.0dB HP LP 100 Hz Hi-pass DC Lo-pass 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone Top ТΑ Off Left T.A Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° EΑ 5.00 Analogue 1 Out Al Ch1 X Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec DR +10dB 6.3V Zoom ZMNormal Drive +20dB Bal. Load Inp. Gain ΙP LO Rect.C\_ Graticule GR CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 **\*\*\*** 

INSTRUMENT SN:

Figure C-34. Screen representation of MFEC indication at stringer 4R, FS 520, hole #10, forward side.

SHEET	C-46	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

**\*\*\*** 

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+11 FWD SIDE SIGNATURE: DATE: 23:51 04 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 52.0dB 171.0° Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SG SP Sum Phase 0.00 Sum Gain 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone TA LA Top Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY

Figure C-35. Screen representation of MFEC indication at stringer 4R, FS 520, hole #11, forward side.

Chan1

Mode

SHEET	C-47	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+11 AFT SIDE SIGNATURE: DATE: 23:52 04 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30kHz 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 X-10.0dB 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 **\*\*\*** Mode

Figure C-36. Screen representation of MFEC indication at stringer 4R, FS 520, hole #11, aft side.

SHEET	C-48	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

**888** 

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+13 FWD SIDE SIGNATURE: DATE: 23:59 04 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 Ch1 Freq 52.0dB 171.0° 1F 30kHz Ch2 Freq 2F 50kHz Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Analogue 1 Out Al Ch1 X Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec DR +10dB 6.3V Zoom ZMNormal Drive +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chanl** Input PosXY

Figure C-37. Screen representation of MFEC indication at stringer 4R, FS 520, hole #13, forward side.

SHEET	C-49	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+13 AFT SIDE SIGNATURE: DATE: 00:00 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz
1G 52.0dB
1P 171.0°
1R X-10.0dB
0.0° 1F 1G Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB Sum Gain 0.0° SG LP 2H SP Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 X-pos 1 1 1V X-pos 2 Y-pos 2 Y-pos 1 2V -30 0 Alarm Shape AT Apply to AA
Alarm action AF Run Box Off Both Alarm Stretch AS Tone TA Off Top Left LA Off Right RA Off Bottom BA Off IA All Off Outer Inner OA 55 2.0° SA Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec 
 Sweep
 SD
 1sec

 Drive
 DR
 +10dB
 6.3V

 Bal. Load
 LO
 -- Zoom ZMNormal +20dB Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Mode Chan1 **888** 

Figure C-38. Screen representation of MFEC indication at stringer 4R, FS 520, hole #13, aft side.

SHEET	C-50	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+14 FWD SIDE SIGNATURE: DATE: 00:01 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone TA LA Top Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom zMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chanl** Input PosXY **888** 

Figure C-39. Screen representation of MFEC indication at stringer 4R, FS 520, hole #14, forward side.

SHEET	C-51	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+14 AFT SIDE SIGNATURE: DATE: 00:02 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X-10.0dB Ch1 Freq 2F 50kHz Ch2 Freq Ch1 Gain 1G 2G Ch2 Gain 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° Sum Gain SP Sum Phase 0.0dB HP LP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to ....
Alarm action AF Run Both Alarm Stretch AS Off Tone TA LA Top Off Off Right RA Off Bottom BA Off IA All Off Outer Inner OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chanu** Input PosXY Mode **888** 

INSTRUMENT SN:

Figure C-40. Screen representation of MFEC indication at stringer 4R, FS 520, hole #14, aft side.

SHEET	C-52	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+15 FWD SIDE SIGNATURE: DATE: 00:13 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chanl** Input PosXY **\*\*\*** 

Figure C-41. Screen representation of MFEC indication at stringer 4R, FS 520, hole #15, forward side.

SHEET	C-53	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 520+15 AFT SIDE SIGNATURE: DATE: 00:15 0.5 '00 Dump Jan Diff 1Ch Probe PR Standard Mode MO Ch1 Display DI XY View VW Ch1 Freq 1F 30kHz Ch2 Freq 2F 50kHz 52.0dB Ch1 Gain 1G Ch2 Gain 2G 40.0dB 171.0° Ch1 Phase 1P Ch2 Phase 2P 0.00 X-10.0dB Ch1 X:Y 1R Ch2 X:Y 2R 0.0dB SP Sum Phase 0.00 Sum Gain SG 0.0dB LP 100 Hz Hi-pass ΗP DC Lo-pass 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone Top ТΑ Off Left LA Off Right RA Off Bottom BΑ Off Inner IA All Off OA 55 Outer SA Start 2.00 End EΑ 5.00 Analogue 1 Out Al Ch1 X Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Zoom ZMNormal Drive DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Mode Chan1 ₩ 

Figure C-42. Screen representation of MFEC indication at stringer 4R, FS 520, hole #15, aft side.

SHEET	C-54	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+3 FWD SIDE SIGNATURE: DATE: 00:15 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1G 1F 30kHz 1G 52.0dB 1P 171.0° 1R X-10.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y ∠ĸ SG 0.0dB SP 0.0° Sum Gain Sum Phase 0.0dB LP 2H HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 X-pos 1 1 Y-pos 2 2V Y-pos 1 1V -30 0 Alarm Shape AT Box Off Apply to AA Both Alarm action AF Run Alarm Stretch AS Tone TA Off LA Top Left Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V
Bal. Load LO ---Zoom ZMNormal +20dB Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chami** Input PosXY **\*\*\*** 

Figure C-43. Screen representation of MFEC indication at stringer 4R, FS 540, hole #3, forward side.

SHEET	C-55	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+3 AFT SIDE SIGNATURE: DATE: 00:36 05 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30kHz 52.0dB 171.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G 1P 2P Ch1 Phase Ch2 Phase 0.00 X-10.0dB 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ IA All Off Inner Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive Zoom zMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 þæ. Mode

INSTRUMENT SN:

Figure C-44. Screen representation of MFEC indication at stringer 4R, FS 540, hole #3, aft side.

SHEET	C-56	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+4 FWD SIDE SIGNATURE: DATE: 00:38 0.5 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive Zoom zMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 þæ. Mode

Figure C-45. Screen representation of MFEC indication at stringer 4R, FS 540, hole #4, forward side.

SHEET	C-57	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+4 AFT SIDE SIGNATURE: DATE: 00:46 05 '00 Dump Jan Probe Standard Diff 1Ch PR Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1

Figure C-46. Screen representation of MFEC indication at stringer 4R, FS 540, hole #4, aft side.

SHEET	C-58	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+5 FWD SIDE SIGNATURE: DATE: 00:47 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SG SP Sum Gain 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BA All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 Mode

Figure C-47. Screen representation of MFEC indication at stringer 4R, FS 540, hole #5, forward side.

SHEET	C-59	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+5 AFT SIDE SIGNATURE: DATE: 00:48 0.5 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1

INSTRUMENT SN:

Figure C-48. Screen representation of MFEC indication at stringer 4R, FS 540, hole #5, aft side.

SHEET	C-60	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+6 FWD SIDE SIGNATURE: DATE: 00:52 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X-10.0dB Ch1 Freq 2F 50kHz Ch2 Freq Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° SP Sum Phase Sum Gain 0.0dB LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to ....
Alarm action AF Run Both Alarm Stretch AS Tone TA LA Top Off Off Right RA Off Bottom BA Off IA All Off Outer Inner OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec 
 Sweep
 SD
 1sec

 Drive
 DR
 +10dB
 6.3V

 Bal. Load
 LO
 -- Zoom ZMNormal +20dB Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chami** Input PosXY Mode ×

Figure C-49. Screen representation of MFEC indication at stringer 4R, FS 540, hole #6, forward side.

SHEET	C-61	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+6 AFT SIDE SIGNATURE: DATE: 00:58 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X-10.0dB 1F Ch1 Freq Ch2 Freq 2.F 50kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Left LA Top ТΑ Off Off Right RA Off Bottom Off BΑ All Off Outer Inner IA OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive Zoom zMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 Mode

Figure C-50. Screen representation of MFEC indication at stringer 4R, FS 540, hole #6, aft side.

SHEET	C-62	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+7 FWD SIDE SIGNATURE: DATE: 01:00 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X-10.0dB Ch1 Freq Ch2 Freq 2F 50kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase Ch1 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB SG 0.0° Sum Phase SP Sum Gain 0.0dB LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V Ω Alarm Shape AT Box Off Apply to ....
Alarm action AF Run
T.A Both Alarm Stretch AS Tone LA Top ТΑ Off Off Right RA Off Bottom BA Off IA All Off SA 2.0° Outer Inner OA 55 SA Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Mode

INSTRUMENT SN:

Figure C-51. Screen representation of MFEC indication at stringer 4R, FS 540, hole #7, forward side.

SHEET	C-63	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+7 AFT SIDE SIGNATURE: DATE: 01:05 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 1F Ch2 Freq 2F 50kHz Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ IA All Off Inner Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1

Figure C-52. Screen representation of MFEC indication at stringer 4R, FS 540, hole #7, aft side.

SHEET	C-64	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+8 FWD SIDE SIGNATURE: DATE: 01:06 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X-10.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.00 SP Sum Phase Sum Gain 0.0dB HP LP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chami** Input PosXY Mode Ø **1**9 €

Figure C-53. Screen representation of MFEC indication at stringer 4R, FS 540, hole #8, forward side.

SHEET	C-65	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+8 AFT SIDE SIGNATURE: DATE: 01:07 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 30kHz 52.0dB 171.0° X-10.0dB 0.0° 1F Ch1 Freq Ch2 Freq 2F 50kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Left LA Top ТΑ Off Off Right RA Off Bottom Off BΑ All Off Outer Inner IA OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive Zoom ZMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Mode Chan1

Figure C-54. Screen representation of MFEC indication at stringer 4R, FS 540, hole #8, aft side.

SHEET	C-66	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+9 FWD SIDE SIGNATURE: DATE: 01:10 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° Y-10.0dB 1F Ch1 Freq Ch2 Freq 2F 50kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP 0.00 Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Left LA Top ТΑ Off Off Right RA Off Bottom Off BΑ All Off Outer Inner IA OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive Zoom zMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chani Mode

Figure C-55. Screen representation of MFEC indication at stringer 4R, FS 540, hole #9, forward side.

SHEET	C-67	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+10 FWD SIDE SIGNATURE: DATE: 01:11 05 '00 Dump Jan Probe Standard Diff 1Ch PR Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY

INSTRUMENT SN:

Figure C-56. Screen representation of MFEC indication at stringer 4R, FS 540, hole #10, forward side.

SHEET	C-68	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+10 AFT SIDE SIGNATURE: DATE: 01:13 05 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chanl** Input PosXY

INSTRUMENT SN:

Figure C-57. Screen representation of MFEC indication at stringer 4R, FS 540, hole #10, aft side.

SHEET	C-69	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+11 FWD SIDE SIGNATURE: DATE: 01:17 05 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0aL 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G Ch1 Phase 1P Ch2 Phase 2P 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP SG Sum Phase 0.00 Sum Gain 0.0dB HP LP Hi-pass DC 100 Hz Lo-pass 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Top ТΑ Off Left LA Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out Al Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1

INSTRUMENT SN:

Figure C-58. Screen representation of MFEC indication at stringer 4R, FS 540, hole #11, forward side.

SHEET	C-70	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+12 FWD SIDE SIGNATURE: DATE: 01:18 05 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Alarm

INSTRUMENT SN:

Figure C-59. Screen representation of MFEC indication at stringer 4R, FS 540, hole #12, forward side.

SHEET	C-71	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 540+14 TOWARDS BOTTOM OF RIVET SIGNATURE: DATE: 01 : 20 0.5 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0ab 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG Sum Phase 0.00 0.0dB HP LP 100 Hz Hi-pass DC Lo-pass 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Top ТΑ Off Left T.A Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° End EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out Al Ch1 X Ch1 Y Persist 0.5sec Sweep SD 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Inp. Gain ΙP Bal. Load LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1

INSTRUMENT SN:

Figure C-60. Screen representation of MFEC indication at stringer 4R, FS 540, hole #14, bottom side.

SHEET	C-72	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+2 FWD SIDE SIGNATURE: DATE: 01:33 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 30kHz 52.0dB 171.0° X-10.0dB 0.0° 1F Ch1 Freq Ch2 Freq 2F 50kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP 0.00 Sum Gain SG 0.0dB Sum Phase HP Lo-pass LP Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Left LA Top ТΑ Off Off Right RA Off Bottom Off BΑ IA All Off Outer Inner OA 55 2.00 SA Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive Zoom zMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chani Mode

Figure C-61. Screen representation of MFEC indication at stringer 4R, FS 560, hole #2, forward side.

SHEET	C-73	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+3 AFT SIDE SIGNATURE: DATE: 01:34 05 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30kHz 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 X-10.0dB 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1

INSTRUMENT SN:

Figure C-62. Screen representation of MFEC indication at stringer 4R, FS 560, hole #3, aft side.

SHEET	C-74	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+6 FWD SIDE SIGNATURE: DATE: 01:35 05 '00 Dump Jan Probe Standard Diff 1Ch PR Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1

Figure C-63. Screen representation of MFEC indication at stringer 4R, FS 560, hole #6, forward side.

SHEET	C-75	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+7 FWD SIDE SIGNATURE: DATE: 01:40 0.5 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ IA All Off Inner Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Mode Chani

Figure C-64. Screen representation of MFEC indication at stringer 4R, FS 560, hole #7, forward side.

SHEET	C-76	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+8 AFT SIDE SIGNATURE: DATE: 01:40 0.5 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1 Mode

INSTRUMENT SN:

Figure C-65. Screen representation of MFEC indication at stringer 4R, FS 560, hole #8, aft side.

SHEET	C-77	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+9 AFT SIDE SIGNATURE: DATE: 01:41 05 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30kHz 52.0dB 171.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 X-10.0dB 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Mode Chan1

INSTRUMENT SN:

Figure C-66. Screen representation of MFEC indication at stringer 4R, FS 560, hole #9, aft side.

SHEET	C-78	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+10 FWD SIDE SIGNATURE: DATE: 01:45 05 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X-10.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY

INSTRUMENT SN:

Figure C-67. Screen representation of MFEC indication at stringer 4R, FS 560, hole #10, forward side.

SHEET	C-79	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+10 AFT SIDE SIGNATURE: DATE: 01:46 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 30kHz 52.0dB 171.0° 1F 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X-10.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB **Manii** Input PosXY Alarm Mode

INSTRUMENT SN:

Figure C-68. Screen representation of MFEC indication at stringer 4R, FS 560, hole #10, aft side.

SHEET	C-80	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+11 FWD SIDE SIGNATURE: DATE: 01:48 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 30kHz 52.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 X-10.0dB 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain IP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X-10.0dB Input PosXY Chan1

Figure C-69. Screen representation of MFEC indication at stringer 4R, FS 560, hole #11, forward side.

SHEET	C-81	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+11 AFT SIDE SIGNATURE: DATE: 01:52 05 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X-10.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB 0.0° SP Sum Gain SG LP Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 X-pos 2 Y-pos 2 1V Y-pos 1 -30 2V 0 Alarm Shape AT Box Apply to AA
Off Alarm action AF Run Both Alarm Stretch AS Tone TA Top Off Left LA Off Right RA Off Bottom BA Off IA All Off SA 2.0° Inner Outer OA 55 Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Normal Zoom ZM+20dB Bal. Load Inp. Gain ΙP Rect.C\_ Graticule GR Input PosXY Chan1

Figure C-70. Screen representation of MFEC indication at stringer 4R, FS 560, hole #11, aft side.

SHEET	C-82	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+12 AFT SIDE SIGNATURE: DATE: 13:49 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB 1F 1G Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SP 0.0° HP SG LP 2H SP Sum Gain Sum Phase 0.0dB Lo-pass 100 Hz Hi-pass X-pos 2 1H 1V X-pos 1 65 0 X-pos 2 Y-pos 2 Y-pos 1 -35 2V 0 Off Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS TA Top -14 Left LA Off Right RA Off Bottom BA Off 20 9.0° Off Outer Inner IA OA Off End SA Start EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist PE 5sec Sweep SD 1sec Sweep Drive Normal DR +10dB 6.3V Zoom ZMInp. Gain +20dB Bal. Load ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

Figure C-71. Screen representation of MFEC indication at stringer 4R, FS 560, hole #12, aft side.

SHEET	C-83	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+12 FWD SIDE SIGNATURE: DATE: 13:50 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 53.0dB 169.0° Ch1 Freq 1F Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P 2P Ch1 Phase Ch2 Phase 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP 0.00 Sum Gain SG 0.0dB Sum Phase HP DC Lo-pass LP 100 Hz Hi-pass 1H X-pos 2 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Alarm Shape AT Apply to AA Both Alarm action AF Run Silent Alarm Stretch AS Off LA Top ТΑ -14 Left Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off SA 9.0° Start EΑ 315.0° Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

Figure C-72. Screen representation of MFEC indication at stringer 4R, FS 560, hole #12, forward side.

SHEET	C-84	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+13 AFT SIDE SIGNATURE: DATE: 13:52 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 40.0dB 2G Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SG 0.0° Sum Gain Sum Phase SP 0.0dB LP 2H HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS Off Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off 9.0° Off SA Start End EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

Figure C-73. Screen representation of MFEC indication at stringer 4R, FS 560, hole #13, aft side.

SHEET	C-85	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+14 FWD SIDE SIGNATURE: DATE: 13:53 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 30kHz 53.0dB 169.0° Ch1 Freq 1F Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase 1P Ch1 Phase 2P 0.00 1R X-10.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP DC Lo-pass 100 Hz Hi-pass 1H X-pos 2 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Alarm Shape AT Apply to AA Both Alarm action AF Run Silent Alarm Stretch AS Off Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off SA 9.0° Start EΑ 315.0° Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep SD 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

INSTRUMENT SN:

Figure C-74. Screen representation of MFEC indication at stringer 4R, FS 560, hole #14, forward side.

SHEET	C-86	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+14 AFT SIDE SIGNATURE: DATE: 13:54 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB 1F Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS Off Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off 9.0° Off SA Start EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chanl** Input PosXY Mode

Figure C-75. Screen representation of MFEC indication at stringer 4R, FS 560, hole #14, aft side.

SHEET	C-87	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+15 AFT SIDE SIGNATURE: DATE: 13:55 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB 1F Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 40.0dB 2G Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SG 0.00 Sum Gain Sum Phase SP 0.0dB LP 2H HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off 20 9.0° Off Outer Inner IA OA Off SA Start End EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep SD 1sec Sweep Drive Zoom ZMNormal DR +10dB 6.3V +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Marnu** Input PosXY Mode

INSTRUMENT SN:

Figure C-76. Screen representation of MFEC indication at stringer 4R, FS 560, hole #15, aft side.

SHEET	C-88	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 560+15 FWD SIDE SIGNATURE: DATE: 13:55 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1G 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain Ch2 Gain 40.0dB 2G Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB 0.00 SG LP 2H SP Sum Gain Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H X-pos 1 65 0 X-pos 2 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS TA Top -14 Left LA Off Right RA Off Bottom BA Off Outer Inner IA 20 OA Off 9.0° Off SA Start End EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist PE 5sec Sweep SD 1sec Sweep Drive DR +10dB 6.3V Zoom ZM Normal Bal. Load +20dB Inp. Gain ΙP Graticule GR Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

INSTRUMENT SN:

Figure C-77. Screen representation of MFEC indication at stringer 4R, FS 560, hole #15, forward side.

SHEET	C-89	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+3 FWD SIDE SIGNATURE: DATE: 13:59 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 2F 2G 2P Ch1 Freq 1F 30kHz
Ch1 Gain 1G 53.0dB
Ch1 Phase 1P 169.0°
Ch1 X:Y 1R X-10.0dB
Sum Phase SP 0.0°
Hi-pass HP DC 100kHz Ch2 Freq Ch2 Gain 40.0dB Ch2 Phase Ch2 X:Y 0.00 Ch2 X:Y 2R 0.0dB
Sum Gain SG 0.0dB
Lo-pass LP 100 Hz
X-pos 2 2H 0 Lo-pass X-pos 2 Y-pos 2 X-pos 1 1H Y-pos 1 1V 65 2V -35 0 Alarm Shape AT Off Apply to AA Both Off Alarm action AF Run Silent Alarm Stretch AS TA -14 qoT Left LA Off RA Right Off Bottom BA Off 20 9.0° Off Outer Inner IA OA Off End EA
Analogue 2 Out A2 SA Start 315.0° Analogue 1 Out A1 Off Persist PE 5sec ZM Normal Sweep SD 1sec
Drive DR +10dB 6.3V
Bal. Load LO Inp. Gain IP +20dB Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

INSTRUMENT SN:

Figure C-78. Screen representation of MFEC indication at stringer 4R, FS 580, hole #3, forward side.

SHEET	C-90	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+3 AFT SIDE SIGNATURE: DATE: 14:00 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB Ch1 Freq 1F Ch2 Freq 2F 100kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch1 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Alarm Shape AT Apply to AA Both Alarm action AF Run Silent Alarm Stretch AS Off Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off 9.0° Off SA Start EΑ 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

INSTRUMENT SN:

Figure C-79. Screen representation of MFEC indication at stringer 4R, FS 580, hole #3, aft side.

SHEET	C-91	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+4 FWD SIDE SIGNATURE: DATE: 14:02 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB 1F Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SG 0.0° Sum Gain SP 0.0dB Sum Phase LP HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS Off Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off SA 9.0° Start EA 315.0° Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chanl** Input PosXY Mode

Figure C-80. Screen representation of MFEC indication at stringer 4R, FS 580, hole #4, forward side.

SHEET	C-92	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+5 AFT SIDE SIGNATURE: DATE: 14:03 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB Ch1 Freq 2F Ch2 Freq 100kHz Ch1 Gain Ch2 Gain 40.0dB 2G Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SG 0.00 Sum Gain Sum Phase SP 0.0dB LP 2H HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off 20 9.0° Off Outer Inner IA OA Off SA Start End EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep SD 1sec Sweep Drive DR +10dB 6.3V Zoom ZM Normal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

Figure C-81. Screen representation of MFEC indication at stringer 4R, FS 580, hole #5, aft side.

SHEET	C-93	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+5 FWD SIDE SIGNATURE: DATE: 14:04 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 Ch1 X:Y 2R 0.0dB 0.0° SG SP Sum Gain 0.0dB Sum Phase LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS Off Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off 9.00 SA Start EA 315.0° Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

Figure C-82. Screen representation of MFEC indication at stringer 4R, FS 580, hole #5, forward side.

SHEET	C-94	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+6 FWD SIDE SIGNATURE: DATE: 14: 05 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y SG 0.0dB 0.0° Sum Gain Sum Phase SP 0.0dB LP 2H HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS Off Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off 9.0° Off SA Start EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

Figure C-83. Screen representation of MFEC indication at stringer 4R, FS 580, hole #6, forward side.

SHEET	C-95	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+7 FWD SIDE SIGNATURE: DATE: 14:06 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SG 0.0° SP Sum Gain 0.0dB Sum Phase LP HP DC Lo-pass Hi-pass 100 Hz 1H X-pos 2 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS Off Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off SA 9.00 Start EA 315.0° Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

INSTRUMENT SN:

Figure C-84. Screen representation of MFEC indication at stringer 4R, FS 580, hole #7, forward side.

SHEET	C-96	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+8 FWD SIDE SIGNATURE: DATE: 14:07 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB 1F 1G Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB 0.00 SG LP 2H SP Sum Gain Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H X-pos 1 65 0 1V X-pos 2 Y-pos 2 Y-pos 1 2V -35 0 Off Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS TA Top -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off 9.0° Off End SA Start EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep SD 1sec Sweep Drive DR +10dB 6.3V Zoom ZM Normal Inp. Gain +20dB Bal. Load ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

Figure C-85. Screen representation of MFEC indication at stringer 4R, FS 580, hole #8, forward side.

SHEET	C-97	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+8 NEAR BOTTOM OF RIVET SIGNATURE: DATE: 15:05 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB 2F Ch1 Freq Ch2 Freq 100kHz Ch1 Gain 1G Ch2 Gain 40.0dB 2G Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 2K SG 0.0dB 0.0° Sum Gain Sum Phase SP 0.0dB LP 2H HP DC Lo-pass 100 Hz Hi-pass X-pos 2 Y-pos 2 1H 1V X-pos 1 65 0 Y-pos 1 -35 2V 0 Off Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS TA Top -14 Left LA Off Right RA Off Bottom BA Off 20 9.0° Off Outer Inner IA OA Off SA Start End EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep SD 1sec Sweep Drive Normal DR +10dB 6.3V Zoom ZMBal. Load Inp. Gain +20dB ΙP Graticule Rect.A\_ **∢** Mode Diff 1Ch Display View Ch1 Persist 5sec Chan1 Input PosXY

Figure C-86. Screen representation of MFEC indication at stringer 4R, FS 580, hole #8, bottom side.

SHEET	C-98	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+9 FWD SIDE SIGNATURE: DATE: 15: 07 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1G 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SG 0.0° Sum Gain SP Sum Phase 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS Off TA Top -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off SA 9.0° Start EA 315.0° Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule Rect.A\_ **∢** Mode Diff 1Ch Display View Ch1 Persist 5sec Chan1 Input PosXY

Figure C-87. Screen representation of MFEC indication at stringer 4R, FS 580, hole #9, forward side.

SHEET	C-99	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+9 AFT SIDE SIGNATURE: DATE: 15:08 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB 1F Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SG 0.0° Sum Gain Sum Phase SP 0.0dB LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Off Alarm Stretch AS TA Top -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off 9.0° Off SA Start End EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep SD 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ **∢** Mode ՕԼԲԲ 1Ch Display View Ch1 Persist 5sec Chan1 Input PosXY

INSTRUMENT SN:

Figure C-88. Screen representation of MFEC indication at stringer 4R, FS 580, hole #9, aft side.

SHEET	C-100	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+10 FWD SIDE SIGNATURE: DATE: 15 : 09 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 53.0dB 169.0° Ch1 Freq 1F Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P 2P Ch1 Phase Ch2 Phase 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Alarm Shape AT Off Apply to AA Both Alarm action AF Run Silent Alarm Stretch AS Off Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off SA 9.00 Start EΑ 315.0° Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep SD 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ **∢** Mode ՕԼԲԲ 1Ch Display View Ch1 Persist 5sec Chan1 Input PosXY

Figure C-89. Screen representation of MFEC indication at stringer 4R, FS 580, hole #10, forward side.

SHEET	C-101	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+10 AFT SIDE SIGNATURE: DATE: 15 : 11 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 40.0dB 2G Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SG 0.00 Sum Gain Sum Phase SP 0.0dB LP 2H HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H X-pos 1 65 0 X-pos 2 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Off Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off 20 9.0° Off Outer Inner IA OA Off SA Start End EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep Drive Bal. Load Sweep SD 1sec Normal DR +10dB 6.3V Zoom ZM +20dB Inp. Gain ΙP Graticule GR Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

INSTRUMENT SN:

Figure C-90. Screen representation of MFEC indication at stringer 4R, FS 580, hole #10, aft side.

SHEET	C-102	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+11 FWD SIDE SIGNATURE: DATE: 15: 12 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB Ch1 Freq 1F Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP DC Lo-pass 100 Hz Hi-pass 1H X-pos 2 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Alarm Shape AT Apply to AA Both Alarm action AF Run Silent Alarm Stretch AS Off Top ТΑ -14 Left LA Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off SA 9.00 Start EΑ 315.0° Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Mani** Input Mode

INSTRUMENT SN:

Figure C-91. Screen representation of MFEC indication at stringer 4R, FS 580, hole #11, forward side.

SHEET	C-103	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+12 FWD SIDE SIGNATURE: DATE: 15 : 13 14 103 Dump Feb Diff 1Ch Probe PR Standard Mode MO VW Ch1 Display DI XY View 1F 30kHz 53.0dB 169.0° Ch1 Freq Ch2 Freq 2F 100kHz 1G Ch1 Gain Ch2 Gain 2G 40.0dB Chl Phase 1P Ch2 Phase 2P 0.00 1R Ch1 X:Y X-10.0dB Ch2 X:Y 2R 0.0dB 0.0° SP Sum Gain SG Sum Phase 0.0dB HP DC Lo-pass LP 100 Hz Hi-pass 2H 1H X-pos 2 X-pos 1 65 0 1V Y-pos 2 2V 0 Y-pos 1 -35 Apply to AA Both Alarm action AF Run Silent Alarm Shape AT Off Alarm Stretch AS Off LA qoT ТΑ -14 Left Off Right RA Off Bottom BA Off Inner IA 20 OA Off Outer SA EA 9.00 Start End 315.0° Off Analogue 2 Out A2 Analogue 1 Out Al Off Persist 5sec Sweep 1sec Zoom ZMNormal Drive DR +10dB 6.3V IP +20dB Bal. Load Inp. Gain LO Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB Chan1 Input PosXY Mode

Figure C-92. Screen representation of MFEC indication at stringer 4R, FS 580, hole #12, forward side.

SHEET	C-104	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+12 AFT SIDE SIGNATURE: DATE: 15: 14 14 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 169.0° 1R X-10.0dB 1F 1G Ch1 Freq Ch2 Freq 2F 100kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y SP 0.0° HP 0.0dB Sum Gain SG LP 2H SP Sum Phase 0.0dB Lo-pass 100 Hz Hi-pass X-pos 2 Y-pos 2 1H 1V X-pos 1 65 0 Y-pos 1 2V -35 0 Off Apply to AA Both
Off Alarm action AF Run Silent Alarm Shape AT Alarm Stretch AS TA -14 Top Left LA Off Right RA Off Bottom BA Off 20 9.0° Off Outer Inner IA OA Off End SA Start EA 315.0° Analogue 2 Out A2 Analogue 1 Out A1 Off Sweep SD 1sec
Drive DR +10dB 6.3V
Bal. Load LO Persist 5sec Normal Zoom ZMInp. Gain +20dB IP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

INSTRUMENT SN:

Figure C-93. Screen representation of MFEC indication at stringer 4R, FS 580, hole #12, aft side.

SHEET	C-105	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+13 FWD SIDE SIGNATURE: DATE: 15: 15 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 53.0dB 169.0° Ch1 Freq 1F Ch2 Freq 2F 100kHz Ch1 Gain 1G 2G Ch2 Gain 40.0dB 1P 2P Ch1 Phase Ch2 Phase 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Alarm Shape AT Off Apply to AA Both Alarm action AF Run Silent Alarm Stretch AS Off LA Top ТΑ -14 Left Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off SA 9.0° Start EΑ 315.0° Off Analogue 2 Out A2 Analogue 1 Out Al Off Persist 5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chanl** Input PosXY Mode

INSTRUMENT SN:

Figure C-94. Screen representation of MFEC indication at stringer 4R, FS 580, hole #13, forward side.

SHEET	C-106	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+14 FWD SIDE SIGNATURE: DATE: 15: 16 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 53.0dB 169.0° Ch1 Freq 1F Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP 0.00 Sum Gain SG 0.0dB Sum Phase LP HP DC Lo-pass 100 Hz Hi-pass 1H X-pos 2 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Off Alarm Shape AT Apply to AA Both Alarm action AF Run Silent Alarm Stretch AS Off LA Top ТΑ -14 Left Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off SA 9.00 Start EΑ 315.0° Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

INSTRUMENT SN:

Figure C-95. Screen representation of MFEC indication at stringer 4R, FS 580, hole #14, forward side.

SHEET	C-107	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 580+15 FWD SIDE SIGNATURE: DATE: 15: 18 14 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 53.0dB 169.0° Ch1 Freq 1F Ch2 Freq 2F 100kHz Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P 2P Ch1 Phase Ch2 Phase 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 65 0 Y-pos 2 Y-pos 1 1V -35 2V 0 Alarm Shape AT Off Apply to AA Both Alarm action AF Run Silent Alarm Stretch AS Off LA Top ТΑ -14 Left Off Right RA Off Bottom BA Off Inner IA 20 Outer OA Off SA 9.00 Start EΑ 315.0° Off Analogue 2 Out A2 Analogue 1 Out Al Off Persist 5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.A\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 53.0dB CH1 X:Y X-10.0dB **Chamil** Input PosXY Mode

INSTRUMENT SN:

Figure C-96. Screen representation of MFEC indication at stringer 4R, FS 580, hole #15, forward side.

SHEET	C-108	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 600+9 FWD SIDE SIGNATURE: DATE: 10:19 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 53.0dB 171.0° -5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out A1 Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule Rect.C\_ **∢** Mode Diff 1Ch Display View Ch1 Persist 0.5sec Input PosXY Chan1 500000 B 4

Figure C-97. Screen representation of MFEC indication at stringer 4R, FS 600, hole #9, forward side.

SHEET	C-109	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 600+9 AFT SIDE SIGNATURE: DATE: 10:23 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 30kHz 53.0dB 171.0° 1F 50kHz Ch1 Freq Ch2 Freq 2.F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-98. Screen representation of MFEC indication at stringer 4R, FS 600, hole #9, aft side.

SHEET	C-110	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 600+10 FWD SIDE SIGNATURE: DATE: 10: 25 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 Ch1 Freq 50kHz 1F 30kHz Ch2 Freq 2F Ch1 Gain 1G 53.0dB 40.0dB Ch2 Gain 2G 171.0° 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP SG 0.0dB Sum Phase 0.00 Sum Gain HP LP 100 Hz Hi-pass DC Lo-pass 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Top ТΑ Off Left T.A Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out Al Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec DR +10dB 6.3V Zoom ZMNormal Drive +20dB Inp. Gain ΙP Bal. Load LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-99. Screen representation of MFEC indication at stringer 4R, FS 600, hole #10, forward side.

SHEET	C-111	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 600+10 AFT SIDE SIGNATURE: DATE: 10:35 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 30kHz 53.0dB 171.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ IA All Off Outer Inner OA 55 2.0° SA Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive Zoom zMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 500000 B 4

INSTRUMENT SN:

Figure C-100. Screen representation of MFEC indication at stringer 4R, FS 600, hole #10, aft side.

SHEET	C-112	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE		•	03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 600+11 FWD SIDE SIGNATURE: DATE: 10: 37 04 03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1G 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 2F 50kHz Ch2 Freq Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SG 0.00 SP Sum Gain Sum Phase 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to ....
Alarm action AF Run Both Alarm Stretch AS Tone TA LA Top Off Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 SA 2.0° Start EΑ 5.0° Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Sweep SD 1sec
Drive DR +10dB 6.3V
Bal. Load LO -Persist 0.5sec Zoom ZMNormal Drive +20dB Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB **Chanl** Input PosXY Mode 500000 B 4

Figure C-101. Screen representation of MFEC indication at stringer 4R, FS 600, hole #11, forward side.

SHEET	C-113	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 600+11 AFT SIDE SIGNATURE: DATE: 10:39 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB 1F 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive Zoom ZMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 500000 B 4

Figure C-102. Screen representation of MFEC indication at stringer 4R, FS 600, hole #11, aft side.

SHEET	C-114	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 600+12 FWD SIDE SIGNATURE: DATE: 10:41 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 30kHz 53.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chani 500000 B 4

Figure C-103. Screen representation of MFEC indication at stringer 4R, FS 600, hole #12, forward side.

SHEET	C-115	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF 4R AT STA 600+12 AFT SIDE SIGNATURE: DATE: 10:43 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 30kHz 53.0dB 171.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chani Mode 500000 B 4

INSTRUMENT SN:

Figure C-104. Screen representation of MFEC indication at stringer 4R, FS 600, hole #12, aft side.

SHEET	C-116	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 620+4 FWD SIDE SIGNATURE: DATE: 10:47 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 30kHz 53.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 X -5.0dB 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-105. Screen representation of MFEC indication at stringer 4R, FS 620, hole #4, forward side.

SHEET	C-117	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 620+5 FWD SIDE SIGNATURE: DATE: 10:48 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB SG 0.0° SP Sum Phase Sum Gain 0.0dB LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 5000000 B 4

Figure C-106. Screen representation of MFEC indication at stringer 4R, FS 620, hole #5, forward side.

SHEET	C-118	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 620+5 AFT SIDE SIGNATURE: DATE: 10:50 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB 1F 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ IA All Off Outer Inner OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 500000 B 4

Figure C-107. Screen representation of MFEC indication at stringer 4R, FS 620, hole #5, aft side.

SHEET	C-119	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE		•	03/26/2003

500000 B 4

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 620+6 FWD SIDE SIGNATURE: DATE: 10:51 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0dB 171.0° 5 0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1

INSTRUMENT SN:

Figure C-108. Screen representation of MFEC indication at stringer 4R, FS 620, hole #6, forward side.

SHEET	C-120	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 620+6 AFT SIDE SIGNATURE: DATE: 10:52 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 53.0dB 171.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ IA All Off Inner Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Mode Chan1 500000 B 4

INSTRUMENT SN:

Figure C-109. Screen representation of MFEC indication at stringer 4R, FS 620, hole #6, aft side.

SHEET	C-121	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

500000 B 4

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 620+7 FWD SIDE SIGNATURE: DATE: 10:54 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0dB 171.0° 5 0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out A1 Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1

INSTRUMENT SN:

Figure C-110. Screen representation of MFEC indication at stringer 4R, FS 620, hole #7, forward side.

SHEET	C-122	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 620+8 FWD SIDE SIGNATURE: DATE: 10:55 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30kHz 53.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 X -5.0dB 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB **Chanl** Input PosXY 500000 B 4

INSTRUMENT SN:

Figure C-111. Screen representation of MFEC indication at stringer 4R, FS 620, hole #8, forward side.

SHEET	C-123	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 620+9 FWD SIDE SIGNATURE: DATE: 10:56 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 53.0dB 171.0° 5 0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

Figure C-112. Screen representation of MFEC indication at stringer 4R, FS 620, hole #9, forward side.

SHEET	C-124	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 640+7 FWD SIDE SIGNATURE: DATE: 10:58 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 30kHz 53.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 X -5.0dB 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-113. Screen representation of MFEC indication at stringer 4R, FS 640, hole #7, forward side.

SHEET	C-125	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 640+9 FWD SIDE SIGNATURE: DATE: 11:01 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30KHZ 53.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-114. Screen representation of MFEC indication at stringer 4R, FS 640, hole #9, forward side.

SHEET	C-126	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 660+14 FWD SIDE SIGNATURE: DATE: 11:05 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB **Chamil** Input PosXY 500000 B 4

Figure C-115. Screen representation of MFEC indication at stringer 4R, FS 660, hole #14, forward side.

SHEET	C-127	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 660+14 AFT SIDE SIGNATURE: DATE: 11:11 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB 1F 50kHz Ch1 Freq Ch2 Freq 2.F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to AA Both Alarm action AF Run Alarm Stretch AS Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ IA All Off Inner Outer OA 55 2.00 SA Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive Zoom ZMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB **Chanu** Input PosXY Mode 500000 B 4

INSTRUMENT SN:

Figure C-116. Screen representation of MFEC indication at stringer 4R, FS 660, hole #14, aft side.

SHEET	C-128	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 660+15 FWD SIDE SIGNATURE: DATE: 11: 12 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° SP Sum Phase Sum Gain 0.0dB LP HP Lo-pass 100 Hz Hi-pass DC X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-117. Screen representation of MFEC indication at stringer 4R, FS 660, hole #15, forward side.

SHEET	C-129	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 660+15 AFT SIDE SIGNATURE: DATE: 11: 14 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB SP 0.0° HP Ch2 X:Y

Sum Gain

Lo-pass

LP

X-pos 2

2H SP Sum Phase 0.0dB 100 Hz Hi-pass Lo-pass X-pos 2 Y-pos 2 1H 1V 50 X-pos 1 1 Y-pos 1 2V -30 Ω Alarm Shape AT Alarm Stretch AS Box Apply to AA
Off Alarm action AF Run Both Tone TA Off Top Left LA Off Off Right RA Bottom BA Off IA All Off
SA 2.0°
e 1 Out Al Ch1 X Outer Inner OA 55 End Start EA 5.00 Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Sweep SD 1sec
Drive DR +10dB 6.3V
Bal. Load LO 0.5sec Normal Persist PE Zoom  $z_{M}$ Inp. Gain +20dB ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB **Chanl** Input PosXY 5000000 B 4

Figure C-118. Screen representation of MFEC indication at stringer 4R, FS 660, hole #15, aft side.

SHEET	C-130	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 680+12 FWD SIDE SIGNATURE: DATE: 11: 15 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB SG 0.00 SP Sum Phase Sum Gain 0.0dB LP HP Lo-pass 100 Hz Hi-pass DC X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chani 500000 B 4

INSTRUMENT SN:

Figure C-119. Screen representation of MFEC indication at stringer 4R, FS 680, hole #12, forward side.

SHEET	C-131	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 680+12 AFT SIDE SIGNATURE: DATE: 11: 17 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB 1F 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ IA All Off Inner Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-120. Screen representation of MFEC indication at stringer 4R, FS 680, hole #12, aft side.

SHEET	C-132	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 700+6 FWD SIDE SIGNATURE: DATE: 11:18 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 53.0dB 171.0° ~-5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-121. Screen representation of MFEC indication at stringer 4R, FS 700, hole #6, forward side.

SHEET	C-133	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: COMMENTS: MFEC OF STR 4R AT STA 700+8 FWD SIDE SIGNATURE: DATE: 11 : 20 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 Ch1 Freq 50kHz 1F 30kHz Ch2 Freq 2F Ch1 Gain 1G 53.0dB 40.0dB Ch2 Gain 2G 171.0° 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP SG Sum Phase 0.00 Sum Gain 0.0dB HP LP 100 Hz Hi-pass DC Lo-pass 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Top ТΑ Off Left LA Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° End EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out Al Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec DR +10dB 6.3V Zoom ZMNormal Drive +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chani 500000 B 4

Figure C-122. Screen representation of MFEC indication at stringer 4R, FS 700, hole #8, forward side.

SHEET	C-134	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 700+9 FWD SIDE SIGNATURE: DATE: 11: 22 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-123. Screen representation of MFEC indication at stringer 4R, FS 700, hole #9, forward side.

SHEET	C-135	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 700+10 FWD SIDE SIGNATURE: DATE: 11: 23 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0dB 171.0° 5 0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-124. Screen representation of MFEC indication at stringer 4R, FS 700, hole #10, forward side.

SHEET	C-136	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 700+11 FWD SIDE SIGNATURE: DATE: 11 : 26 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out A1 Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-125. Screen representation of MFEC indication at stringer 4R, FS 700, hole #11, forward side.

SHEET	C-137	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 700+13 FWD SIDE SIGNATURE: DATE: 11: 27 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-126. Screen representation of MFEC indication at stringer 4R, FS 700, hole #13, forward side.

SHEET	C-138	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 700+14 FWD SIDE SIGNATURE: DATE: 11: 29 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

Figure C-127. Screen representation of MFEC indication at stringer 4R, FS 700, hole #14, forward side.

SHEET	C-139	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 700+15 FWD SIDE SIGNATURE: DATE: 01:35 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° 5 0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chani 5000000 B 4

INSTRUMENT SN:

Figure C-128. Screen representation of MFEC indication at stringer 4R, FS 700, hole #15, forward side.

SHEET	C-140	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+4 FWD SIDE SIGNATURE: DATE: 11: 31 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 Ch1 Freq 53.0dB 171.0° 50kHz 1F 30kHz Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP SG Sum Phase 0.00 Sum Gain 0.0dB HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Top ТΑ Off Left LA Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-129. Screen representation of MFEC indication at stringer 4R, FS 720, hole #4, forward side.

SHEET	C-141	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+4 AFT SIDE SIGNATURE: DATE: 11: 32 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 2F 50kHz Ch2 Freq Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 2K SG 0.0dB 0.00 Sum Gain SP Sum Phase 0.0dB LP 2H HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 X-pos 1 1 Y-pos 2 2V Y-pos 1 1V -30 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top Off Left Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB **Chanl** Input PosXY Mode 5000000 B 4

Figure C-130. Screen representation of MFEC indication at stringer 4R, FS 720, hole #4, aft side.

SHEET	C-142	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+5 FWD SIDE SIGNATURE: DATE: 11:33 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0dB 171.0° - 0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.00 EΑ 5.00 Analogue 1 Out A1 Ch1 X Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 B 4

Figure C-131. Screen representation of MFEC indication at stringer 4R, FS 720, hole #5, forward side.

SHEET	C-143	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+5 AFT SIDE SIGNATURE: DATE: 11: 35 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° Sum Phase SP Sum Gain 0.0dB LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to ....
Alarm action AF Run
T.A Both Alarm Stretch AS Tone LA Top ТΑ Off Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Mode Chan1 500000 B 4

INSTRUMENT SN:

Figure C-132. Screen representation of MFEC indication at stringer 4R, FS 720, hole #5, aft side.

SHEET	C-144	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+6 FWD SIDE SIGNATURE: DATE: 11:36 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° Sum Phase SP Sum Gain 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chani 5000000 B 4

INSTRUMENT SN:

Figure C-133. Screen representation of MFEC indication at stringer 4R, FS 720, hole #6, forward side.

SHEET	C-145	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+6 AFT SIDE SIGNATURE: DATE: 11:38 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° SP Sum Phase Sum Gain 0.0dB LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to AA
Alarm action AF Run Both Alarm Stretch AS Tone TA LA Top Off Left Off Right RA Off Bottom BA Off IA All Off Outer Inner OA 55 2.00 SA Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 500000 B 4

Figure C-134. Screen representation of MFEC indication at stringer 4R, FS 720, hole #6, aft side.

SHEET	C-146	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+7 FWD SIDE SIGNATURE: DATE: 11:39 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 53.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 X -5.0dB 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chani 5000000 B 4

Figure C-135. Screen representation of MFEC indication at stringer 4R, FS 720, hole #7, forward side.

SHEET	C-147	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+7 AFT SIDE SIGNATURE: DATE: 11: 42 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 53.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP Graticule Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chani Mode 5000000 B 4

Figure C-136. Screen representation of MFEC indication at stringer 4R, FS 720, hole #7, aft side.

SHEET	C-148	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+8 FWD SIDE SIGNATURE: DATE: 11: 43 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0ab 171.0° -5.0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° EΑ 5.00 Analogue 1 Out Al Ch1 X Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec DR +10dB 6.3V Zoom ZMNormal Drive +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-137. Screen representation of MFEC indication at stringer 4R, FS 720, hole #8, forward side.

SHEET	C-149	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+8 AFT SIDE SIGNATURE: DATE: 11: 45 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB 1F 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ IA All Off Inner Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep SD 1sec
Drive DR +10dB 6.3V Sweep 1sec Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-138. Screen representation of MFEC indication at stringer 4R, FS 720, hole #8, aft side.

SHEET	C-150	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+9 FWD SIDE SIGNATURE: DATE: 11:46 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0dB 171.0° - 0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out A1 Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 5000000 B 4

INSTRUMENT SN:

Figure C-139. Screen representation of MFEC indication at stringer 4R, FS 720, hole #9, forward side.

SHEET	C-151	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+9 AFT SIDE SIGNATURE: DATE: 11: 47 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Rect.C\_ Graticule GR CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Mode Chan1 500000 B 4

INSTRUMENT SN:

Figure C-140. Screen representation of MFEC indication at stringer 4R, FS 720, hole #9, aft side.

SHEET	C-152	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+10 FWD SIDE SIGNATURE: DATE: 11 : 49 0.4 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 Ch1 Freq 1F 30kHz Ch2 Freq 2F 50kHz Ch1 Gain 1G 53.0dB 40.0dB Ch2 Gain 2G 171.0° 1P Ch1 Phase Ch2 Phase 2P 0.00 1R Ch1 X:Y X -5.0dB Ch2 X:Y 2R 0.0dB SP SG Sum Phase 0.00 Sum Gain 0.0dB HP LP 100 Hz Hi-pass DC Lo-pass 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Top ТΑ Off Left T.A Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.00 EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out Al Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec DR +10dB 6.3V Zoom ZMNormal Drive +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

Figure C-141. Screen representation of MFEC indication at stringer 4R, FS 720, hole #10, forward side.

SHEET	C-153	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+10 AFT SIDE SIGNATURE: DATE: 11 : 50 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 53.0dB 171.0° 5 0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chani 500000 B 4

INSTRUMENT SN:

Figure C-142. Screen representation of MFEC indication at stringer 4R, FS 720, hole #10, aft side.

SHEET	C-154	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+11 FWD SIDE SIGNATURE: DATE: 11:51 04 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30KHZ 53.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 X -5.0dB 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 500000 B 4

INSTRUMENT SN:

Figure C-143. Screen representation of MFEC indication at stringer 4R, FS 720, hole #11, forward side.

SHEET	C-155	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+11 AFT SIDE SIGNATURE: DATE: 11:52 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 30kHz 53.0dB 171.0° 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 X -5.0dB 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP Hi-pass DC Lo-pass 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 53.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 500000 B 4

INSTRUMENT SN:

Figure C-144. Screen representation of MFEC indication at stringer 4R, FS 720, hole #11, aft side.

SHEET	C-156	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+12 FWD SIDE SIGNATURE: DATE: 11:53 04 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 53.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq Ch2 Freq 2F 50kHz Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y Ch2 X:Y ZE Sum Gain SG Lo-pass LP Z-pos 2 2H 0.0dB 0.00 SP Sum Phase 0.0dB HP DC 100 Hz Hi-pass Lo-pass X-pos 2 Y-pos 2 1H 1V 50 X-pos 1 1 Y-pos 1 -30 2V 0 Alarm Shape AT Box Apply to AA
Off Alarm action AF Run Both Alarm Stretch AS Tone TA Off Top Left LA Off Off Right RA Bottom BA Off IA All Off
SA 2.0°
e 1 Out Al Ch1 X Inner Outer OA 55 Start End EΑ 5.0° Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Sweep SD 1sec
Drive DR +10dB 6.3V
Bal. Load LO -0.5sec Normal Persist PE Zoom  $z_{M}$ +20dB Inp. Gain ΙP Rect.C\_ Graticule GR **Chanl** Input PosXY 5000000 B 4

Figure C-145. Screen representation of MFEC indication at stringer 4R, FS 720, hole #12, forward side.

SHEET	C-157	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+12 AFT SIDE SIGNATURE: DATE: 01:42 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB SG 0.0° SP Sum Gain 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to ....
Alarm action AF Run Both Alarm Stretch AS Tone LA Top ТΑ Off Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 2.00 SA Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB **Chanl** Input PosXY Mode 5000000 B 4

INSTRUMENT SN:

Figure C-146. Screen representation of MFEC indication at stringer 4R, FS 720, hole #12, aft side.

SHEET	C-158	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+2 FWD SIDE SIGNATURE: DATE: 01:43 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30KHZ 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 B 4

Figure C-147. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #2, forward side.

SHEET	C-159	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+3 FWD SIDE SIGNATURE: DATE: 01:45 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB SG 0.00 Sum Phase SP Sum Gain 0.0dB LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to AA Both Alarm action AF Run Alarm Stretch AS Tone TA LA Top Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 B 4

Figure C-148. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #3, forward side.

SHEET	C-160	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+3 AFT SIDE SIGNATURE: DATE: 01:47 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 1F 50kHz Ch1 Freq Ch2 Freq 2.F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 5000000 B 4

Figure C-149. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #3, aft side.

SHEET	C-161	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+4 FWD SIDE SIGNATURE: DATE: 01:48 0.1 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° 5.0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 X -5.0dB 1R Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 B 4

Figure C-150. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #4, forward side.

SHEET	C-162	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

5000000 B 4

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+5 FWD SIDE SIGNATURE: DATE: 01:49 0.1 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0aL 171.0° -5.0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA Start 2.0° EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out Al Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chani

INSTRUMENT SN:

Figure C-151. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #5, forward side.

SHEET	C-163	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720+5 AFT SIDE SIGNATURE: DATE: 01:50 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° 5.0dB 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 X -5.0dB 1R Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 5000000 F

Figure C-152. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #5, aft side.

SHEET	C-164	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+6 FWD SIDE SIGNATURE: DATE: 01:54 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain IP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

INSTRUMENT SN:

Figure C-153. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #6, forward side.

SHEET	C-165	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+6 AFT SIDE SIGNATURE: DATE: 01:56 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 1F 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 5000000 F

INSTRUMENT SN:

Figure C-154. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #6, aft side.

SHEET	C-166	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+7 FWD SIDE SIGNATURE: DATE: 01:57 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 2F 50kHz Ch2 Freq Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y ∠ĸ SG 0.0dB 0.0° SP Sum Gain Sum Phase 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to AA
Alarm action AF Run Both Alarm Stretch AS Tone TA LA Top Off Left Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 2.00 SA Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB **Chanl** Input PosXY 5000000 F

INSTRUMENT SN:

Figure C-155. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #7, forward side.

SHEET	C-167	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+7 AFT SIDE SIGNATURE: DATE: 01:59 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 5000000 F

Figure C-156. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #7, aft side.

SHEET	C-168	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+8 FWD SIDE SIGNATURE: DATE: Dump 02:00 0.1 Jan '00 Diff 1Ch Probe PR Standard Mode MO Ch1 Display DI XY View VW 30KHZ 52.0dB 171.0° 30kHz 50kHz Ch1 Freq 1F Ch2 Freq 2F 1G Ch1 Gain Ch2 Gain 2G 40.0dB 1P Ch1 Phase 2P Ch2 Phase 0.00 1R X -5.0dB Ch2 X:Y 2R 0.0dB Ch1 X:Y SP Sum Phase 0.00 Sum Gain SG 0.0dB LP HP Hi-pass DC Lo-pass 100 Hz X-pos 2 1H 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V 2V -30 0 Box Apply to AA Alarm Shape AT Both Alarm action AF Run Alarm Stretch AS Off Tone Off Left LA Off Top TΑ Bottom Right RA Off BΑ Off Outer Inner IA All Off OA 55 SA 2.0° Start End 5.00 FΑ Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y PE 0.5sec SD 1sec Persist Sweep Drive Zoom zMNormal DR +10dB 6.3V Inp. Gain ΙP +20dB Bal. Load LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Mode 

INSTRUMENT SN:

Figure C-157. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #8, forward side.

SHEET	C-169	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+8 AFT SIDE SIGNATURE: DATE: 02:02 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive Zoom ZMNormal DR +10dB 6.3V +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Mode Chan1 5000000 F

Figure C-158. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #8, aft side.

SHEET	C-170	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+9 FWD SIDE SIGNATURE: DATE: 02:04 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 30kHz 52.0dB 171.0° Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom zMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

INSTRUMENT SN:

Figure C-159. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #9, forward side.

SHEET	C-171	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720A+9 AFT SIDE SIGNATURE: DATE: 02:05 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Mode Chan1 5000000 F

Figure C-160. Screen representation of MFEC indication at stringer 4R, FS 720A, hole #9, aft side.

SHEET	C-172	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+1 FWD SIDE SIGNATURE: DATE: 02:07 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° 5 0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chani 

INSTRUMENT SN:

Figure C-161. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #1, forward side.

SHEET	C-173	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+1 AFT SIDE SIGNATURE: DATE: 02:08 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 52.0dB 171.0° V -5.0dB 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 

Figure C-162. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #1, aft side.

SHEET	C-174	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+2 FWD SIDE SIGNATURE: DATE: 02:10 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° ~-5.0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP Hi-pass DC 100 Hz 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 

INSTRUMENT SN:

Figure C-163. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #2, forward side.

SHEET	C-175	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+3 FWD SIDE SIGNATURE: DATE: 02:11 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° 5 0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 

INSTRUMENT SN:

Figure C-164. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #3, forward side.

SHEET	C-176	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+4 FWD SIDE SIGNATURE: DATE: 02:13 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° -5.0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 

INSTRUMENT SN:

Figure C-165. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #4, forward side.

SHEET	C-177	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+4 AFT SIDE SIGNATURE: DATE: 02:14 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 1F 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 

Figure C-166. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #4, aft side.

SHEET	C-178	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+5 FWD SIDE SIGNATURE: DATE: 02:15 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° V -5.0dB 1F Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.00 SG Sum Phase SP Sum Gain 0.0dB LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom zMNormal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

Figure C-167. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #5, forward side.

SHEET	C-179	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+5 AFT SIDE SIGNATURE: DATE: 02:17 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 50kHz Ch1 Freq 1F Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 

INSTRUMENT SN:

Figure C-168. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #5, aft side.

SHEET	C-180	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+6 FWD SIDE SIGNATURE: DATE: 02: 27 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° 5.0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

Figure C-169. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #6, forward side.

SHEET	C-181	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE		•	03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+6 AFT SIDE SIGNATURE: DATE: 02:29 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2.F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Mode Chan1 

INSTRUMENT SN:

Figure C-170. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #6, aft side.

SHEET	C-182	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+7 FWD SIDE SIGNATURE: DATE: 02:30 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 52.0dB 171.0° -5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Phase Sum Gain SG 0.0dB 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out A1 Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom  $z_{M}$ Normal +20dB Bal. Load Inp. Gain ΙP LO Graticule Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

Figure C-171. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #7, forward side.

SHEET	C-183	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+7 AFT SIDE SIGNATURE: DATE: 02:32 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 2F 50kHz Ch2 Freq Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.0° SP Sum Gain SG LP Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 2V Y-pos 1 1V -30 0 Alarm Shape AT Box Off Apply to AA
Alarm action AF Run Both Alarm Stretch AS Tone TA Off LA Top Left Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep Drive Bal. Load Sweep 1sec DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP LO Graticule Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB **Chanl** Input PosXY 5000000 F

Figure C-172. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #7, aft side.

SHEET	C-184	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+8 FWD SIDE SIGNATURE: DATE: 02:34 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 52.0dB 171.0° ~-5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone TA LA Top Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec DR +10dB 6.3V Zoom ZMNormal Drive +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

Figure C-173. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #8, forward side.

SHEET	C-185	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+8 AFT SIDE SIGNATURE: DATE: 02:35 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° Sum Phase SP Sum Gain 0.0dB LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chani Mode 5000000 F

INSTRUMENT SN:

Figure C-174. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #8, aft side.

SHEET	C-186	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+9 FWD SIDE SIGNATURE: DATE: 02:36 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° -5.0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

INSTRUMENT SN:

Figure C-175. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #9, forward side.

SHEET	C-187	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+9 AFT SIDE SIGNATURE: DATE: 02:37 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain IP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 

Figure C-176. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #9, aft side.

SHEET	C-188	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+10 FWD SIDE SIGNATURE: DATE: 02:39 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° Sum Phase SP Sum Gain 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone TA LA Top Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom zMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

Figure C-177. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #10, forward side.

SHEET	C-189	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+10 AFT SIDE SIGNATURE: DATE: 02:40 0.1 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30kHz 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 

Figure C-178. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #10, aft side.

SHEET	C-190	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+11 FWD SIDE SIGNATURE: DATE: 02:41 0.1 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 Ch1 Freq 52.0dB 171.0° 50kHz 1F 30kHz Ch2 Freq 2F Ch1 Gain 1G 40.0dB Ch2 Gain 2G 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out A1 Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 

INSTRUMENT SN:

Figure C-179. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #11, forward side.

SHEET	C-191	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+11 AFT SIDE SIGNATURE: DATE: 02:42 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 50kHz Ch1 Freq 1F Ch2 Freq 2.F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.0° SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 

Figure C-180. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #11, aft side.

SHEET	C-192	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+12 FWD SIDE SIGNATURE: DATE: 02:43 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° -5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Gain SG 0.0dB Sum Phase LP HP Lo-pass 100 Hz Hi-pass DC 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB **Chamil** Input PosXY 5000000 F

INSTRUMENT SN:

Figure C-181. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #12, forward side.

SHEET	C-193	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+13 FWD SIDE SIGNATURE: DATE: 02:44 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 52.0dB 171.0° ~-5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

INSTRUMENT SN:

Figure C-182. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #13, forward side.

SHEET	C-194	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+13 AFT SIDE SIGNATURE: DATE: 02:46 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 1F 1G Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB 0.00 SG LP 2H SP Sum Gain Sum Phase 0.0dB HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 X-pos 1 1 X-pos 2 Y-pos 2 1V 2V Y-pos 1 -30 Ω Alarm Shape AT Apply to AA
Alarm action AF Run Box Off Both Alarm Stretch AS Tone TA Off LA Top Left Off Right RA Off Bottom BA Off IA All Off SA 2.0° Outer Inner OA 55 2.00 Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Sweep SD 1sec
Drive DR +10dB 6.3V 0.5sec Persist Normal Zoom  $z_{M}$ +20dB Inp. Gain IP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB **Chanl** Input PosXY 5000000 F

INSTRUMENT SN:

Figure C-183. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #13, aft side.

SHEET	C-195	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+14 FWD SIDE SIGNATURE: DATE: 02:48 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 2F 50kHz Ch2 Freq Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° Sum Phase SP Sum Gain 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to AA Both Alarm action AF Run Alarm Stretch AS Tone TA Off LA Top Left Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y 0.5sec Persist Sweep 1sec Sweep Drive Bal. Load DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP LO Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB **Chanl** Input PosXY 5000000 F

Figure C-184. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #14, forward side.

SHEET	C-196	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720B+14 AFT SIDE SIGNATURE: DATE: 02:49 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 2F 50kHz Ch2 Freq Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase Ch1 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.00 SG LP 2H SP Sum Gain Sum Phase 0.0dB HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 X-pos 1 1 Y-pos 2 2V Y-pos 1 1V -30 0 Alarm Shape AT Box Off Apply to AA Both Alarm action AF Run Alarm Stretch AS Tone TA Off LA Top Left Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 SA 2.0° Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Zoom ZMNormal +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB **Chanl** Input PosXY Mode 5000000 F

Figure C-185. Screen representation of MFEC indication at stringer 4R, FS 720B, hole #14, aft side.

SHEET	C-197	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	ISSUE DATE		03/26/2003

5000000 F

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720C+6 FWD SIDE SIGNATURE: DATE: 02:50 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° 5 0dB Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 LP HP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom zMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY

Figure C-186. Screen representation of MFEC indication at stringer 4R, FS 720C, hole #6, forward side.

Chan1

Mode

SHEET	C-198	NO.	4-086624-20
TOTAL	C-208		
ISSUE DA	TE		03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720C+6 AFT SIDE SIGNATURE: DATE: 02:51 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB 0.00 SG Sum Phase SP Sum Gain 0.0dB LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to ....
Alarm action AF Run Both Alarm Stretch AS Tone LA Top ТΑ Off Off Right RA Off Bottom BA Off IA All Off Outer Inner OA 55 2.00 SA Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Normal Zoom ZM+20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 5000000 F

INSTRUMENT SN:

Figure C-187. Screen representation of MFEC indication at stringer 4R, FS 720C, hole #6, aft side.

SHEET	C-199	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720C+7 FWD SIDE SIGNATURE: DATE: 02:52 01 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 52.0dB 171.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP LP 100 Hz Hi-pass DC Lo-pass 1H X-pos 2 2H X-pos 1 50 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 2 Out A2 Analogue 1 Out A1 Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 Mode 5000000 F

Figure C-188. Screen representation of MFEC indication at stringer 4R, FS 720C, hole #7, forward side.

SHEET	C-200	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720C+8 FWD SIDE SIGNATURE: DATE: 02:53 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 2F 50kHz Ch2 Freq Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° Sum Gain SP Sum Phase 0.0dB LP HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to AA Both Alarm action AF Run Alarm Stretch AS Tone TA Off LA Top Left Off Right RA Off Bottom BA Off IA All Off Inner Outer OA 55 2.00 SA Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Rect.C\_ Graticule CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB **Chami** Input PosXY 5000000 F

Figure C-189. Screen representation of MFEC indication at stringer 4R, FS 720C, hole #8, forward side.

SHEET	C-201	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720C+8 AFT SIDE SIGNATURE: DATE: 02:54 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 50kHz Ch1 Freq Ch2 Freq 2F Ch1 Gain Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.00 Sum Phase SP Sum Gain 0.0dB LP HP DC Lo-pass Hi-pass 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Alarm Shape AT Box Off Apply to ....
Alarm action AF Run
T.A Both Alarm Stretch AS Tone LA Top ТΑ Off Off Right RA Off Bottom BA Off IA All Off Outer Inner OA 55 2.00 SA Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y 0.5sec Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Normal Zoom ZM+20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB **Chami** Input PosXY Mode 5000000 F

Figure C-190. Screen representation of MFEC indication at stringer 4R, FS 720C, hole #8, aft side.

SHEET	C-202	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720C+13 FWD SIDE SIGNATURE: DATE: 02:55 0.1 '00 Dump Jan Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 Ch1 Freq 50kHz 1F 30kHz Ch2 Freq 2F Ch1 Gain 1G 52.0dB 40.0dB Ch2 Gain 2G 171.0° 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP SG Sum Phase 0.00 Sum Gain 0.0dB HP LP Hi-pass DC Lo-pass 100 Hz 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone Top ТΑ Off Left T.A Off Right RA Off Off Bottom BΑ All Off Inner IA Outer OA 55 SA Start 2.0° EΑ 5.00 Analogue 2 Out A2 Analogue 1 Out Al Ch1 X Ch1 Y Persist 0.5sec Sweep 1sec Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

INSTRUMENT SN:

Figure C-191. Screen representation of MFEC indication at stringer 4R, FS 720C, hole #13, forward side.

SHEET	C-203	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720C+15 FWD SIDE SIGNATURE: DATE: 02:56 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 52.0dB 171.0° V -5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2F Ch1 Gain 1G Ch2 Gain 2G 40.0dB 1P Ch1 Phase Ch2 Phase 2P 0.00 1R X -5.0dB Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Phase Sum Gain SG 0.0dB LP HP Lo-pass Hi-pass DC 100 Hz 1H 50 X-pos 2 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm Stretch AS Alarm action AF Run Off Tone TA LA Top Off Left Off Right RA Off Bottom BA Off All Off Inner IA Outer OA 55 SA 2.00 Start EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec 
 Sweep
 SD
 1sec

 Drive
 DR
 +10dB
 6.3V

 Bal. Load
 LO
 -- Zoom ZMNormal +20dB Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB Input PosXY Chan1 5000000 F

Figure C-192. Screen representation of MFEC indication at stringer 4R, FS 720C, hole #15, forward side.

SHEET	C-204	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720D+8 AFT SIDE SIGNATURE: DATE: 18: 12 07 '03 Dump Feb Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 1F 30kHz 1G 54.0dB 1P 169.0° 1R X-11.0dB Ch1 Freq 2F 50kHz Ch2 Freq Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch2 Phase Ch1 Phase 2P 0.00 Ch2 X:Y 2R Ch1 X:Y 0.0dB SG 0.0° SP Sum Gain Sum Phase 0.0dB LP 2H HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 40 X-pos 1 0 Y-pos 2 2V Y-pos 1 1V -32 0 Apply to AA Trace 1 Alarm action AF Run Silent Alarm Shape AT Box Alarm Stretch AS 0.2s TA Top Off Left LA Off Right RA Off Bottom BA Off IA All Off SA 0.0° Inner Outer OA Off Start EΑ Off Off Analogue 1 Out A1 Analogue 2 Out A2 Off 0.5sec Normal Persist Sweep 1sec Sweep SD 1sec
Drive DR +10dB 6.3V Normal Zoom  $z_{M}$ +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chani 

INSTRUMENT SN:

Figure C-193. Screen representation of MFEC indication at stringer 4R, FS 720D, hole #8, aft side.

SHEET	C-205	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720D+7 AFT SIDE SIGNATURE: DATE: 02:59 01 '00 Dump Jan Probe Standard MO Diff 1Ch PR Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB 1F Ch1 Freq 50kHz Ch2 Freq 2F Ch1 Gain Ch2 Gain 40.0dB 2G Ch2 Phase Ch2 X:Y Ch1 Phase 2P 0.00 2R Ch1 X:Y 0.0dB 0.00 SG LP 2H SP Sum Gain Sum Phase 0.0dB HP DC Lo-pass 100 Hz Hi-pass X-pos 2 1H 1V 50 X-pos 1 1 X-pos 2 Y-pos 2 Y-pos 1 -30 2V 0 Alarm Shape AT Box Apply to AA
Off Alarm action AF Run Both Alarm Stretch AS Tone TA Off Top Left LA Off Off Right RA Bottom BA Off IA All Off SA 2.0° Inner Outer OA 55 Start End EΑ 5.00 Analogue 1 Out A1 Ch1 X Analogue 2 Out A2 Ch1 Y 0.5sec Normal Persist Sweep 1sec 
 Sweep
 SD
 1sec

 Drive
 DR
 +10dB
 6.3V

 Bal. Load
 LO
 -- Zoom  $z_{M}$ +20dB Bal. Load Inp. Gain ΙP Graticule GR Rect.C\_ Input PosXY Chan1 

Figure C-194. Screen representation of MFEC indication at stringer 4R, FS 720D, hole #7, aft side.

SHEET	C-206	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720D+6 FWD SIDE SIGNATURE: DATE: 02:57 01 '00 Dump Jan Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 1F 30kHz 1G 52.0dB 1P 171.0° 1R X -5.0dB Ch1 Freq 1F 50kHz Ch2 Freq 2.F Ch1 Gain 1G Ch2 Gain 2G 40.0dB Ch1 Phase Ch2 Phase 2P 0.00 Ch2 X:Y Ch1 X:Y 2R 0.0dB 0.00 SP Sum Phase Sum Gain SG 0.0dB LP HP Lo-pass Hi-pass DC 100 Hz X-pos 2 1H 50 2H X-pos 1 1 Y-pos 2 Y-pos 1 1V -30 2V 0 Box Alarm Shape AT Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top ТΑ Off Left Off Right RA Off Bottom Off BΑ All Off Inner IA Outer OA 55 SA 2.0° Start End EΑ 5.00 Ch1 X Analogue 1 Out A1 Analogue 2 Out A2 Ch1 Y Persist 0.5sec Sweep 1sec Sweep Drive DR +10dB 6.3V Zoom ZMNormal +20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 171.0° CH1 GAIN 52.0dB CH1 X:Y X -5.0dB **Chanu** Input PosXY 5000000 F

INSTRUMENT SN:

Figure C-195. Screen representation of MFEC indication at stringer 4R, FS 720D, hole #6, forward side.

SHEET	C-207	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF STR 4R AT STA 720E+9 FWD SIDE SIGNATURE: DATE: 18:14 07 '03 Dump Feb Probe Diff 1Ch PR Standard Mode MO Display DI XY View VW Ch1 30KH2 54.0dB 169.0° Ch1 Freq 50kHz 1F Ch2 Freq 2F Ch1 Gain 1G 2G 40.0dB Ch2 Gain 1P 2P Ch1 Phase Ch2 Phase 0.00 1R X-11.0dB Ch1 X:Y Ch2 X:Y 2R 0.0dB SP Sum Gain SG 0.0dB Sum Phase 0.00 HP Lo-pass LP 100 Hz Hi-pass DC 1H X-pos 2 2H X-pos 1 40 0 Y-pos 2 Y-pos 1 1V -32 2V 0 Alarm Shape AT Box Apply to AA Trace 1 Alarm action AF Run Silent Alarm Stretch AS 0.2s LA Top ТΑ Off Left Off Right RA Off Bottom BA Off Inner IA All Off Outer OA Off SA 0.00 Start End EΑ Off Off Analogue 2 Out A2 Analogue 1 Out A1 Off Persist 0.5sec Sweep 1sec Drive Normal DR +10dB 6.3V Zoom zM+20dB Inp. Gain ΙP Bal. Load Graticule GR Rect.C\_ CH1 FREQ 30kHz CH1 PHASE 169.0° CH1 GAIN 54.0dB CH1 X:Y X-11.0dB Input PosXY Chan1 Mode 

INSTRUMENT SN:

Figure C-196. Screen representation of MFEC indication at stringer 4R, FS 720E, hole #9, forward side.

SHEET	C-208	NO.	4-086624-20
TOTAL	C-208		
ISSUE DATE			03/26/2003

500000 B 4

OPERATOR: INSTRUMENT SN: CODE: PROBE SN: LOCATION: CAL BLOCK SN: JOB NAME: TEST COMMENTS: MFEC OF LAP CALIBRATION SIGNATURE: DATE: 10:17 04 '03 Dump Feb Probe MO Diff 1Ch PR Standard Mode Display DI XY View VW Ch1 Ch1 Freq 1F 30kHz Ch2 Freq 2F 50kHz 1G 53.0dB 2G Ch1 Gain Ch2 Gain 40.0dB 171.00 1P Ch2 Phase Ch1 Phase 2P 0.00 1R Ch1 X:Y X -5.0dB Ch2 X:Y 2R 0.0dB SP Sum Phase SG 0.00 Sum Gain 0.0dB HP LP 100 Hz Hi-pass DC Lo-pass 1H 2H X-pos 1 50 X-pos 2 1 Y-pos 1 1V -30 Y-pos 2 2V 0 Alarm Shape AT Box Apply to AA Both Alarm action AF Run Alarm Stretch AS Off Tone LA Top TA Off Left Off Right RA Off BA Off Bottom All Off Inner IA Outer OA 55 2.0° Start SA End EΑ 5.00 Analogue 1 Out A1 Ch1 X Analogue 2 Out A2 Ch1 Y Persist PΕ 0.5sec Sweep SD 1sec Normal Drive DR +10dB 6.3V Zoom  $z_{M}$ +20dB Bal. Load Inp. Gain ΙP LO Graticule GR Rect.C\_ **∢** Mode ՕԼԲԲ 1Ch Display View Ch1 Persist 0.5sec Input PosXY

Figure C-197. Screen representation of MFEC calibration.

Chan1

SHEET	D-1	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	E		03/26/2003

## APPENDIX D

# PHOTOGRAPHS OF GENERAL EXTERNAL VISUAL INSPECTION AND INTERNAL DETAILED VISUAL INSPECTIONS

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SHEET	D-2	NO.	4-086624-20
TOTAL	D-28		
ISSUE DATE			03/26/2003

FIGURE D-11	Photograph showing internal detailed visual inspection indication at BS 400, stringer 4L, rivet 11 (panel F1)
FIGURE D-12	Photograph showing internal detailed visual inspection indication at BS 400, stringer 4L, rivet 15 (panel F1)
FIGURE D-1	3 Photograph showing internal detailed visual inspection indication at BS 420, stringer 4L, rivet 5 (panel F1)
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FIGURE D-17	Photograph showing internal detailed visual inspection indication at BS 520, stringer 4R, rivet 9 (panel FT1/F3)
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FIGURE D-20	0 Photograph showing internal detailed visual inspection indication at BS 520, stringer 4R, rivet 12 (panel FT1/F3)
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FIGURE D-22	Photograph showing internal detailed visual inspection indication at BS 520, stringer 4R, rivet 14 (panel FT1/F3)
FIGURE D-23	Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 3 (panel FT1/F3)

SHEET	D-3	NO.	4-086624-20
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ISSUE DAT	Έ		03/26/2003

FIGURE D-24	Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 4 (panel FT1/F3)
FIGURE D-25	Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 5 (panel FT1/F3)
FIGURE D-26	6 Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 6 (panel FT1/F3)
FIGURE D-27	Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 7 (panel FT1/F3)
FIGURE D-28	Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 8 (panel FT1/F3)
FIGURE D-29	Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 9 (panel FT1/F3)
FIGURE D-30	Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 10 (panel FT1/F3)
FIGURE D-31	Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 13 (panel FT1/F3)
FIGURE D-32	2 Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 14 (panel FT1/F3)
	Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 15 (panel FT1/F3)
FIGURE D-34	Photograph showing internal detailed visual inspection indication at BS 560, stringer 4R, rivet 11 (panel FT1/F3)
FIGURE D-35	Photograph showing internal detailed visual inspection indication at BS 600, stringer 4R, rivet 9 (panel FT2/F4)
FIGURE D-36	Photograph showing internal detailed visual inspection indication at BS 600, stringer 4R, rivet 10 (panel FT2/F4)

SHEET	D-4	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	ISSUE DATE		03/26/2003

ograph snowing internal detailed visual inspection indication at BS 600, stringer rivet 11 (panel FT2/F4)
tograph showing internal detailed visual inspection indication at BS 620, stringer rivet 4 (panel FT2/F4)
ograph showing internal detailed visual inspection indication at BS 620, stringer rivet 5 (panel FT2/F4)
ograph showing internal detailed visual inspection indication at BS 620, stringer rivet 6 (panel FT2/F4)
ograph showing internal detailed visual inspection indication at BS 620, stringer rivet 7 (panel FT2/F4)
ograph showing internal detailed visual inspection indication at BS 620, stringer rivet 9 (panel FT2/F4)
ograph showing internal detailed visual inspection indication at BS 720, stringer rivet 9 (panel FT2/F4)
tograph showing internal detailed visual inspection indication at BS 720, stringer rivet 11 (panel FT2/F4
ograph showing internal detailed visual inspection indication at BS 720, stringer rivet 12 (panel FT2/F4)
ograph showing internal detailed visual inspection indication at BS 720D, stringer ivet 8 (panel FT3/F5)
ograph showing internal detailed visual inspection indication at BS 720D, stringer rivet 10 (panel FT3/F5)

SHEET	<b>D-5</b>	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	Е		03/26/2003



Figure D-1. Photograph showing paint flaking at BS 360 +4", on stringer 4L (panel F1).



Figure D-2. Photograph showing paint flaking near BS 970 on stringer 4L (panel F2).

SHEET	D-6	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	E		03/26/2003



Figure D-3. Photograph showing general paint flaking along stringer 4L (panel F2).



Figure D-4. Photograph showing general paint flaking and some corrosion along stringer 4R near BS 580 -3" (panel FT1/F3).

SHEET	D-7	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	TΕ		03/26/2003



Figure D-5. Photograph showing general paint flaking and some corrosion along stringer 4R near BS 530+10" (panel FT1/F3).



Figure D-6. Photograph showing general paint flaking and some corrosion along stringer 4R near BS 640 -5" (panel FT2/F4).

SHEET	D-8	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	Έ		03/26/2003



Figure D-7. Photograph showing general paint flaking and some corrosion along stringer 4R near BS 720F +5" (panel FT3/F5).



Figure D-8. Photograph showing general paint flaking and some corrosion along stringer 4L (panel FT3/F5).

SHEET	D-9	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	E		03/26/2003

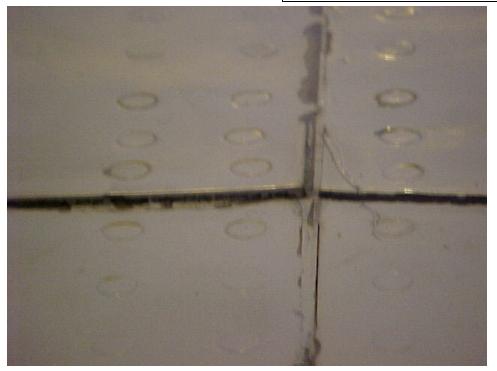


Figure D-9. Photograph showing possible gap between skins at stringer 4R and the circumferential butt joint at BS 1010 (panel FT4/F6).



Figure D-10. Photograph showing damaged stringers 7L and 8L from BS 1070 to BS 1110 (panel FT4/F6).

SHEET	D-10	NO.	4-086624-20
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ISSUE DAT	ГЕ		03/26/2003



Figure D-11. Photograph showing internal detailed visual inspection indication at BS 400, stringer 4L, rivet 11 (panel F1).



Figure D-12. Photograph showing internal detailed visual inspection indication at BS 400, stringer 4L, rivet 15 (panel F1).

SHEET	D-11	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	E		03/26/2003



Figure D-13. Photograph showing internal detailed visual inspection indication at BS 420, stringer 4L, rivet 5 (panel F1).



Figure D-14. Photograph showing internal detailed visual inspection indication at BS 420, stringer 4L, rivet 10 (panel F1).

SHEET	D-12	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	E		03/26/2003



Figure D-15. Photograph showing internal detailed visual inspection indication at BS 500, stringer 4R, rivet 9 (panel FT1/F3).



Figure D-16. Photograph showing internal detailed visual inspection indication at BS 520, stringer 4R, rivet 8 (panel FT1/F3).

SHEET	D-13	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	ISSUE DATE		03/26/2003



Figure D-17. Photograph showing internal detailed visual inspection indication at BS 520, stringer 4R, rivet 9 (panel FT1/F3).



Figure D-18. Photograph showing internal detailed visual inspection indication at BS 520, stringer 4R, rivet 10 (panel FT1/F3).

SHEET	D-14	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	ISSUE DATE		03/26/2003



Figure D-19. Photograph showing internal detailed visual inspection indication at BS 520, stringer 4R, rivet 11 (panel FT1/F3).



Figure D-20. Photograph showing internal detailed visual inspection indication at BS 520, stringer 4R, rivet 12 (panel FT1/F3).

SHEET	D-15	NO.	4-086624-20
TOTAL	D-28		
ISSUE DATE			03/26/2003



Figure D-21. Photograph showing internal detailed visual inspection indication at BS 520, stringer 4R, rivet 13 (panel FT1/F3).



Figure D-22. Photograph showing internal detailed visual inspection indication at BS 520, stringer 4R, rivet 14 (panel FT1/F3).

SHEET	D-16	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	ISSUE DATE		03/26/2003



Figure D-23. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 3 (panel FT1/F3).



Figure D-24. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 4 (panel FT1/F3).

SHEET	D-17	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	ISSUE DATE		03/26/2003



Figure D-25. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 5 (panel FT1/F3).



Figure D-26. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 6 (panel FT1/F3).

SHEET	D-18	NO.	4-086624-20
TOTAL	D-28		
ISSUE DAT	ISSUE DATE		03/26/2003



Figure D-27. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 7 (panel FT1/F3).



Figure D-28. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 8 (panel FT1/F3).

SHEET	D-19	NO.	4-086624-20
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ISSUE DAT	ISSUE DATE		03/26/2003



Figure D-29. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 9 (panel FT1/F3).



Figure D-30. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 10 (panel FT1/F3).

SHEET	D-20	NO.	4-086624-20
TOTAL	D-28		
ISSUE DATE			03/26/2003



Figure D-31. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 13 (panel FT1/F3).



Figure D-32. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 14 (panel FT1/F3).

SHEET	D-21	NO.	4-086624-20
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Figure D-33. Photograph showing internal detailed visual inspection indication at BS 540, stringer 4R, rivet 15 (panel FT1/F3).



Figure D-34. Photograph showing internal detailed visual inspection indication at BS 560, stringer 4R, rivet 11 (panel FT1/F3).

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Figure D-35. Photograph showing internal detailed visual inspection indication at BS 600, stringer 4R, rivet 9 (panel FT2/F4).



Figure D-36. Photograph showing internal detailed visual inspection indication at BS 600, stringer 4R, rivet 10 (panel FT2/F4).

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Figure D-37. Photograph showing internal detailed visual inspection indication at BS 600, stringer 4R, rivet 11 (panel FT2/F4).



Figure D-38. Photograph showing internal detailed visual inspection indication at BS 620, stringer 4R, rivet 4 (panel FT2/F4).

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Figure D-39. Photograph showing internal detailed visual inspection indication at BS 620, stringer 4R, rivet 5 (panel FT2/F4).

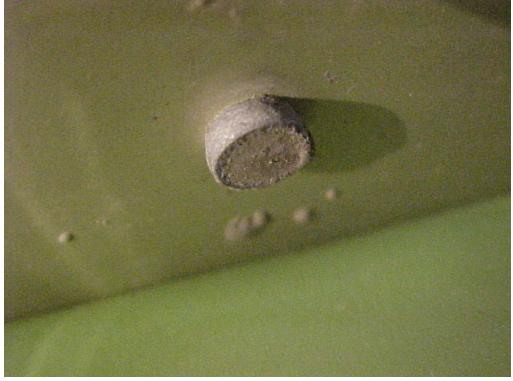


Figure D-40. Photograph showing internal detailed visual inspection indication at BS 620, stringer 4R, rivet 6 (panel FT2/F4).

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Figure D-41. Photograph showing internal detailed visual inspection indication at BS 620, stringer 4R, rivet 7 (panel FT2/F4).



Figure D-42. Photograph showing internal detailed visual inspection indication at BS 620, stringer 4R, rivet 9 (panel FT2/F4).

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Figure D-43. Photograph showing internal detailed visual inspection indication at BS 720, stringer 4R, rivet 9 (panel FT2/F4).



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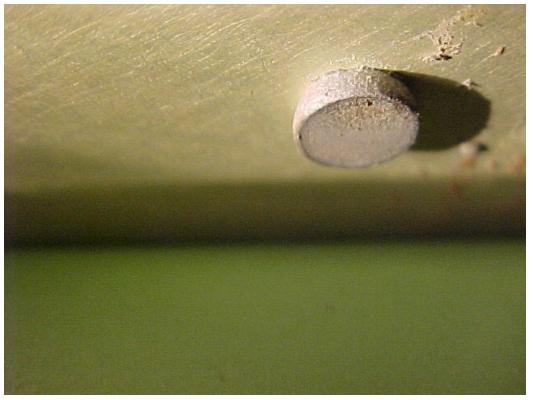


Figure D-45. Photograph showing internal detailed visual inspection indication at BS 720, stringer 4R, rivet 12 (panel FT2/F4).



Figure D-46. Photograph showing internal detailed visual inspection indication at BS 720D, stringer 4R, rivet 8 (panel FT3/F5).

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Figure D-47. Photograph showing internal detailed visual inspection indication at BS 720D, stringer 4R, rivet 10 (panel FT3/F5).

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## APPENDIX E

PHOTOGRAPHS OF AND SCREEN REPRESENTATIONS OF RIVET CHECK INSPECTION

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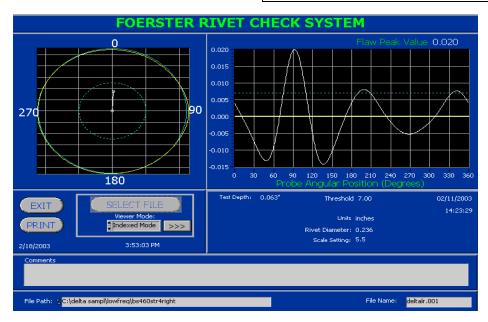


Figure E-1. Screen representation of the reference standard calibration using a 0.100" EDM Notch in 0.050"/0.040" stack-up (Panel FT1/F3).

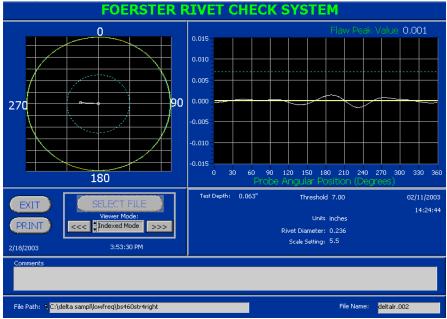


Figure E-2. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #1 (Panel FT1/F3)

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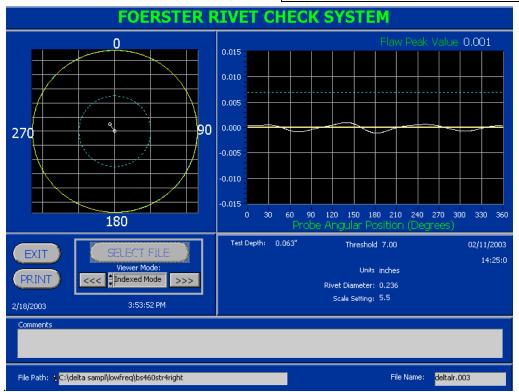


Figure E-3. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #2 (Panel FT1/F3).

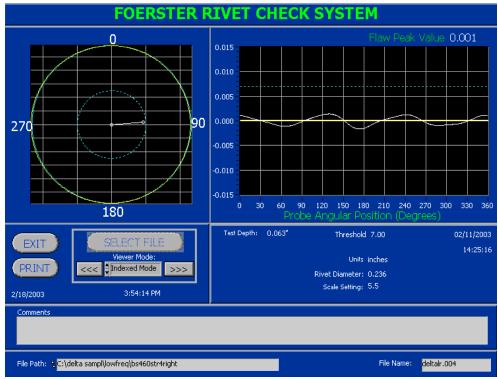


Figure E-4. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #3 (Panel FT1/F3).

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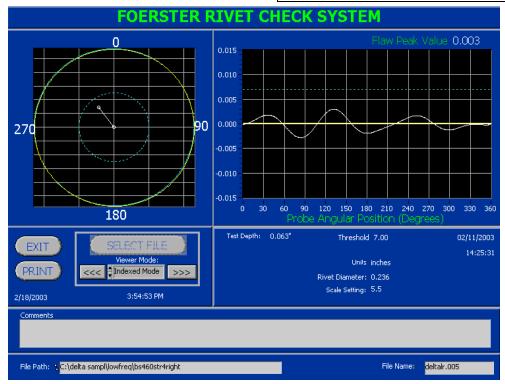


Figure E-5. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #4 (Panel FT1/F3).

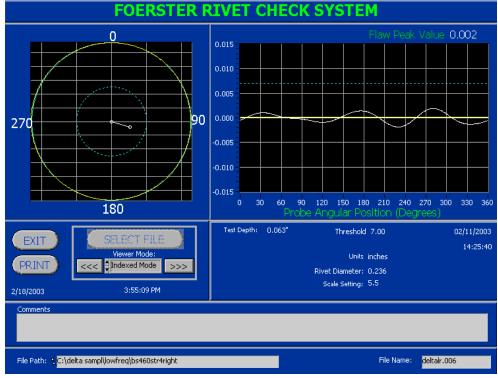


Figure E-6. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #5 (Panel FT1/F3).

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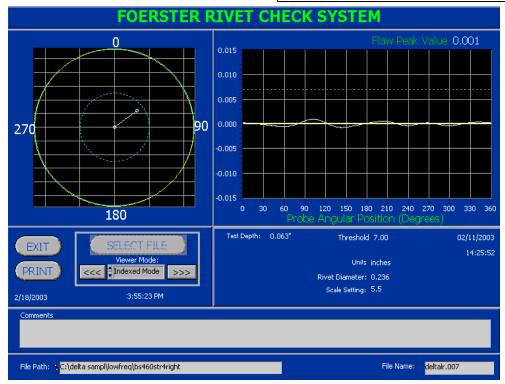


Figure E-7. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #6 (Panel FT1/F3).

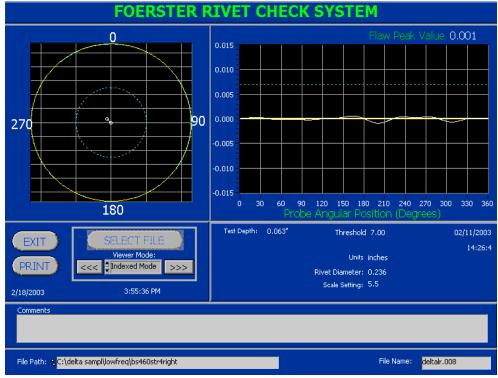


Figure E-8. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #7 (Panel FT1/F3).

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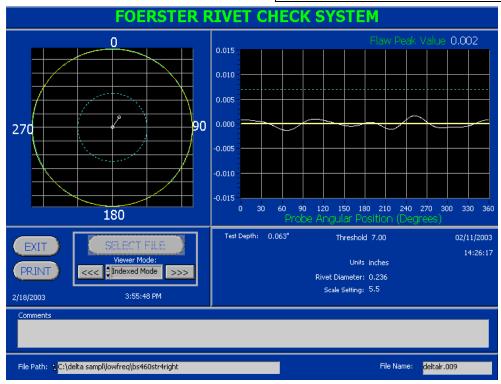


Figure E-9. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #8 (Panel F1).

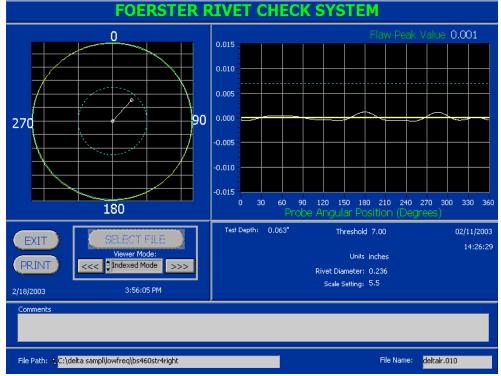


Figure E-10. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #9 (Panel FT1/F3).

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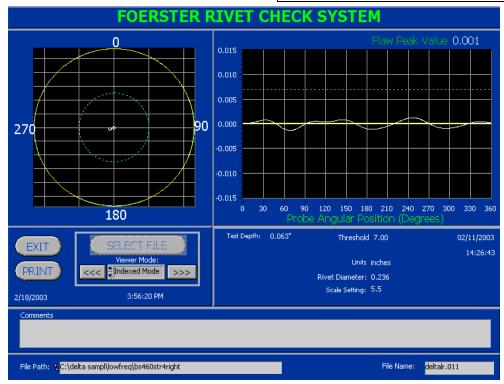


Figure E-11. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #10 (Panel FT1/F3).

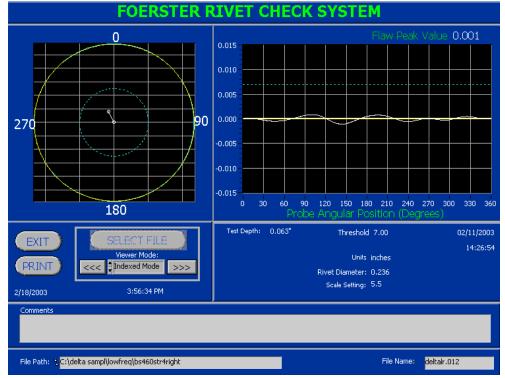


Figure E-12. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #11 (Panel FT1/F3).

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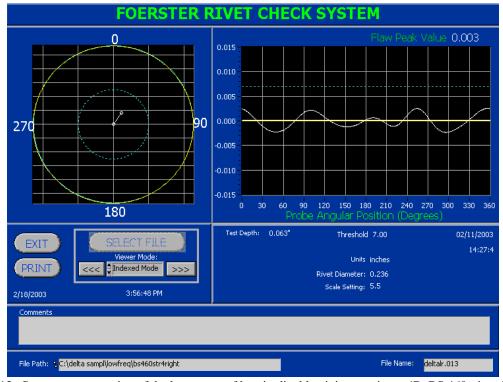


Figure E-13. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #12 (Panel FT1/F3).

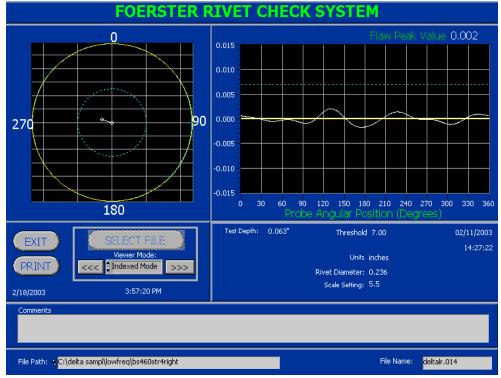


Figure E-14. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #13 (Panel FT1/F3).

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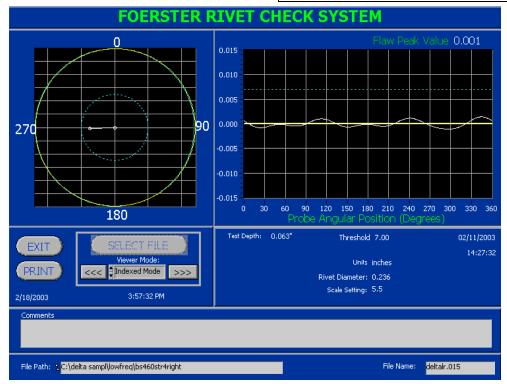


Figure E-15. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #14 (Panel FT1/F3).

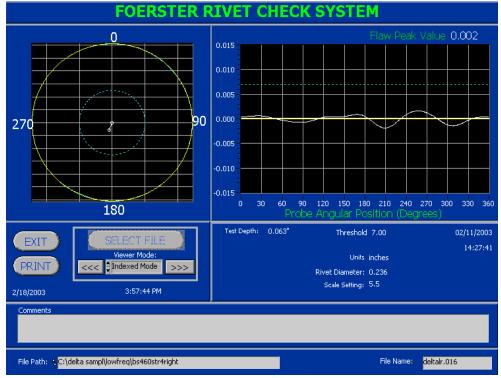


Figure E-16. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #15 (Panel FT1/F3).

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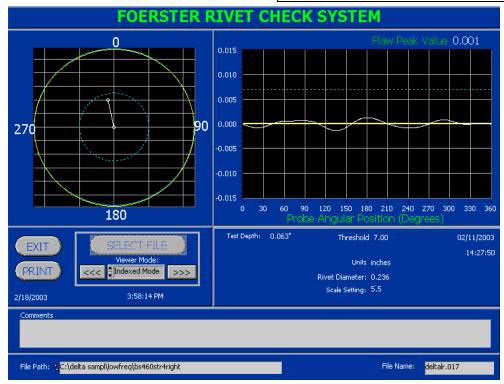


Figure E-17. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 460, rivet #16 (Panel FT1/F3).

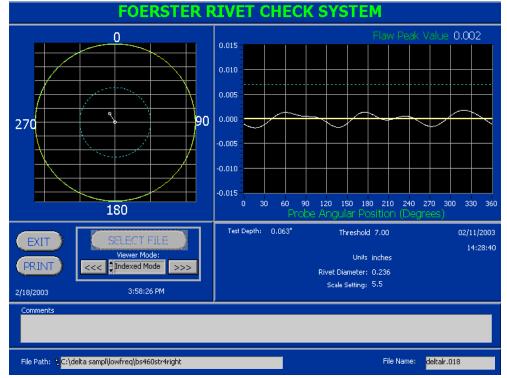


Figure E-18. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #1 (Panel FT1/F3).

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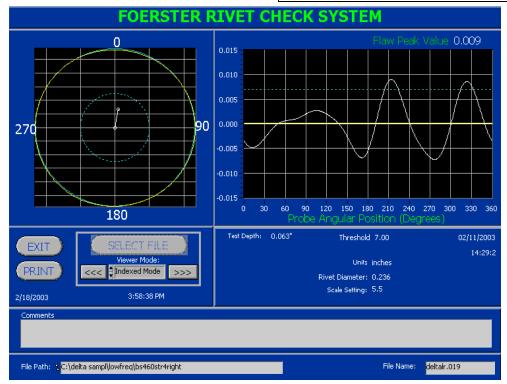


Figure E-19. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #2 (Panel FT1/F3).

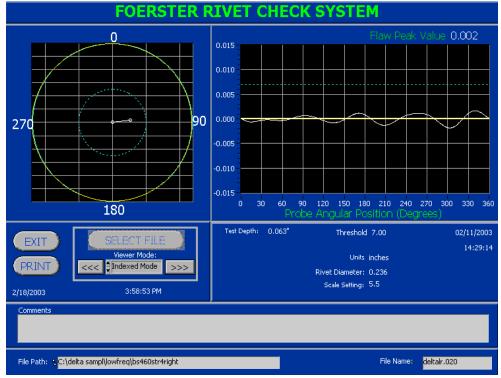


Figure E-20. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #3 (Panel FT1/F3).

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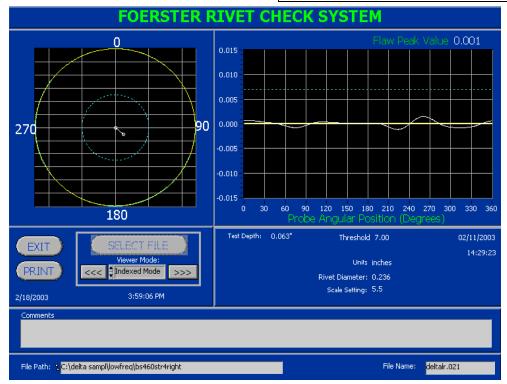


Figure E-21. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #4 (Panel FT1/F3).

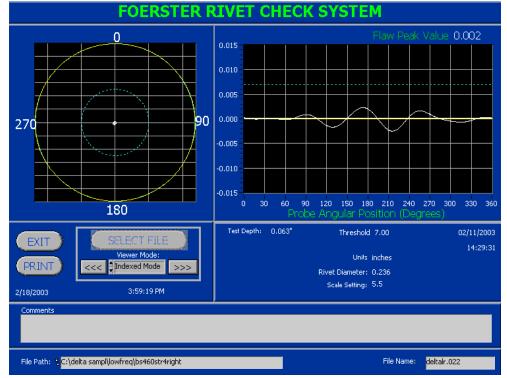


Figure E-22. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #5 (Panel FT1/F3).

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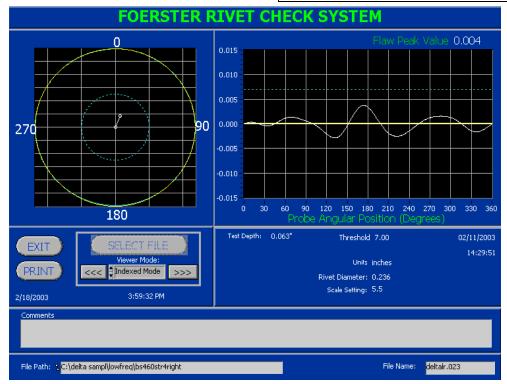


Figure E-23. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #6 (Panel FT1/F3).

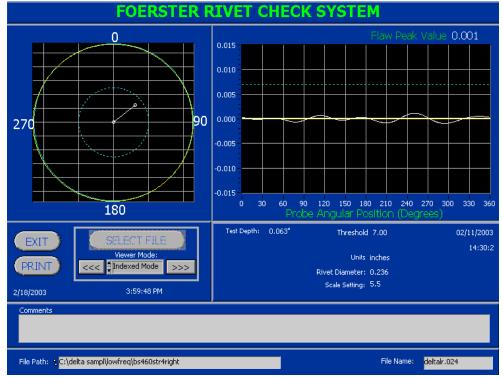


Figure E-24. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #7 (Panel FT1/F3).

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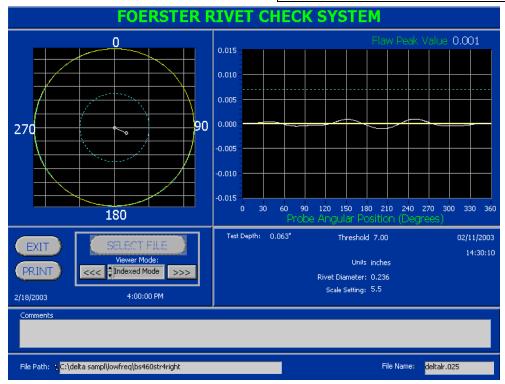


Figure E-25. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #8 (Panel FT1/F3).

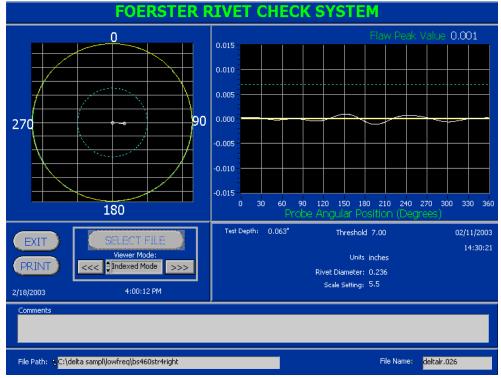


Figure E-26. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #9 (Panel FT1/F3).

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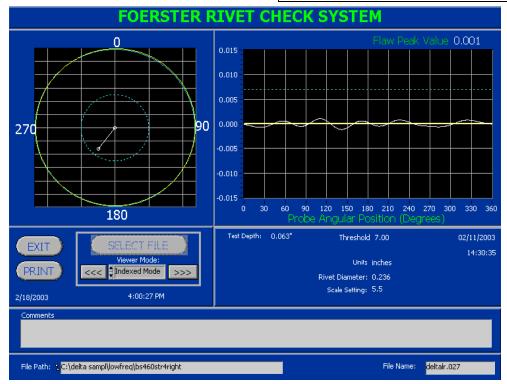


Figure E-27. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #10 (Panel FT1/F3).

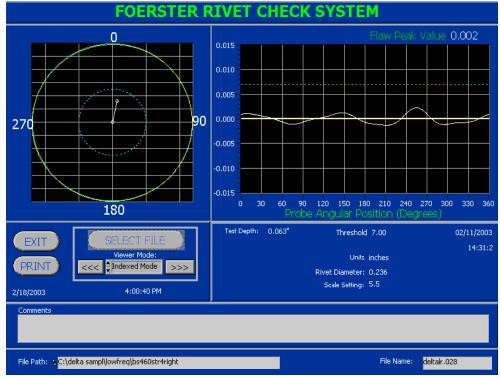


Figure E-28. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #11 (Panel FT1/F3).

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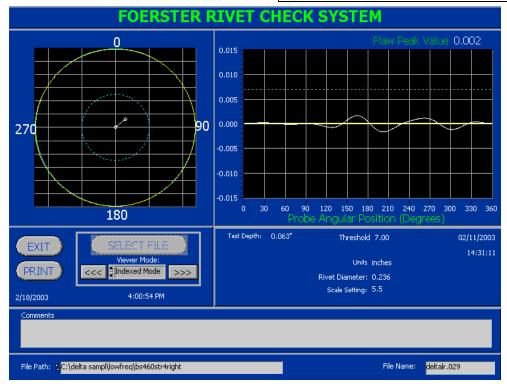


Figure E-29. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #12 (Panel FT1/F3).

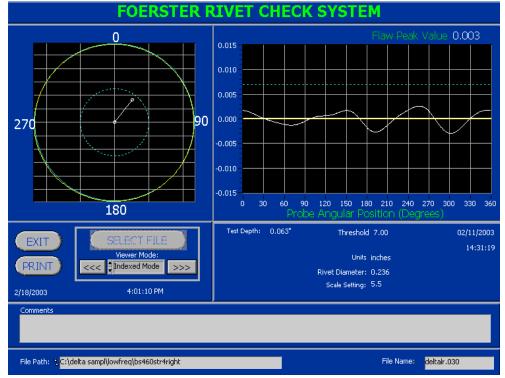


Figure E-30. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #13 (Panel FT1/F3).

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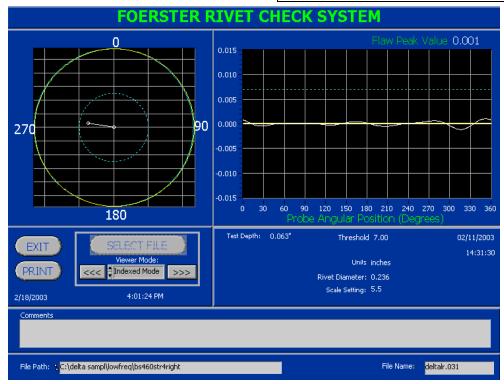


Figure E-31. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #14 (Panel FT1/F3).

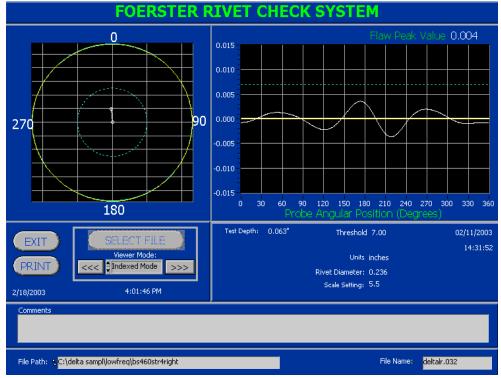


Figure E-32. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 480, rivet #15 (Panel FT1/F3).

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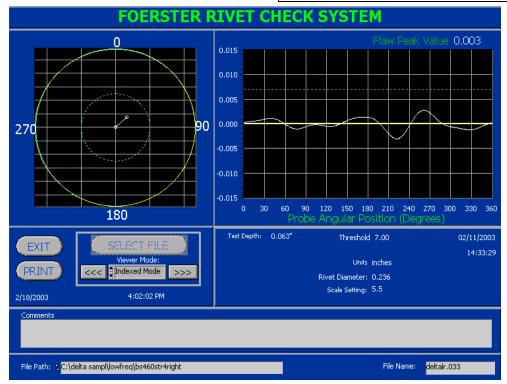


Figure E-33. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #1 (Panel FT1/F3).

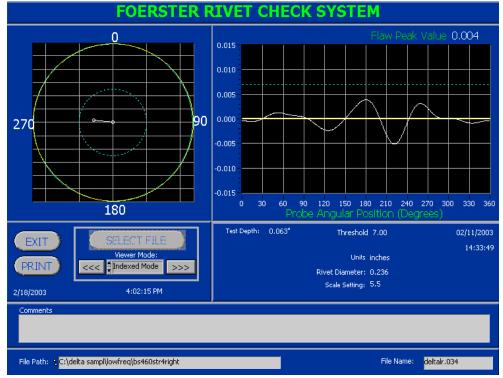


Figure E-34. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #2 (Panel FT1/F3).

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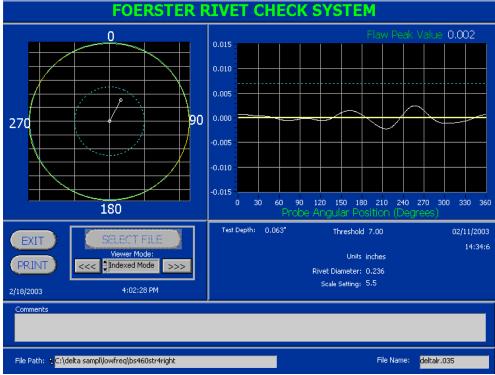


Figure E-35. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #3 (Panel FT1/F3).

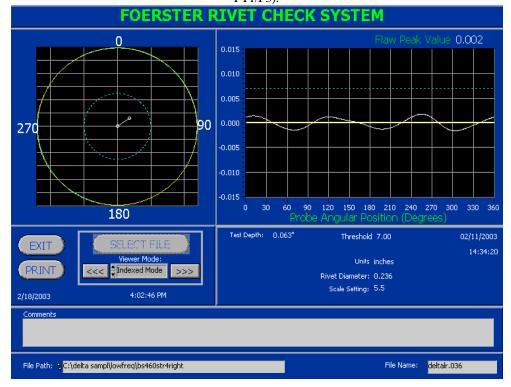


Figure E-36. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #4 (Panel FT1/F3).

SHEET	E-41	NO.	4-086624-20
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ISSUE DATE			03/26/2003

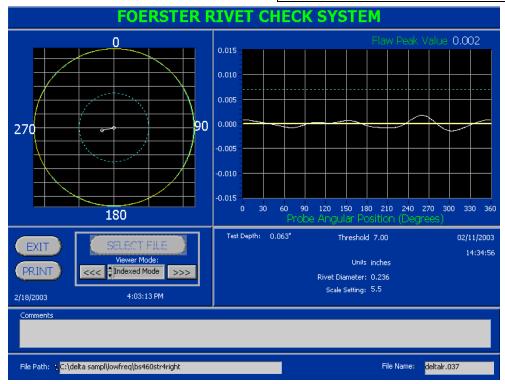


Figure E-37. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #5 (Panel FT1/F3).

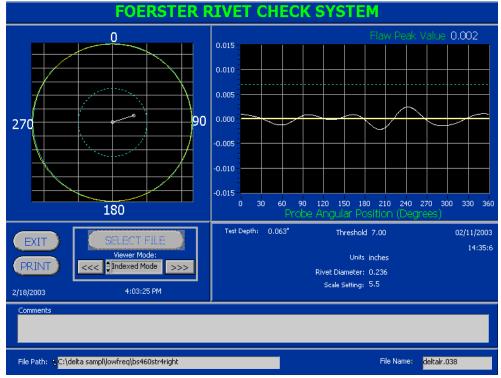


Figure E-38. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #6 (Panel FT1/F3).

SHEET	E-42	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

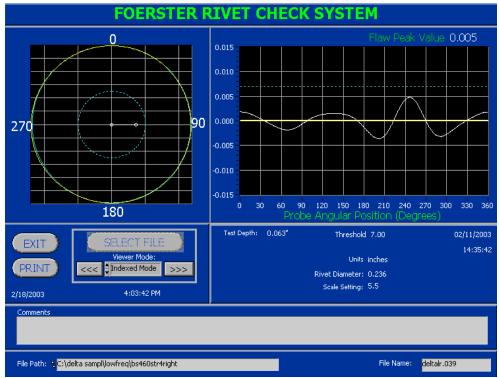


Figure E-39. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #7 (Panel FT1/F3).

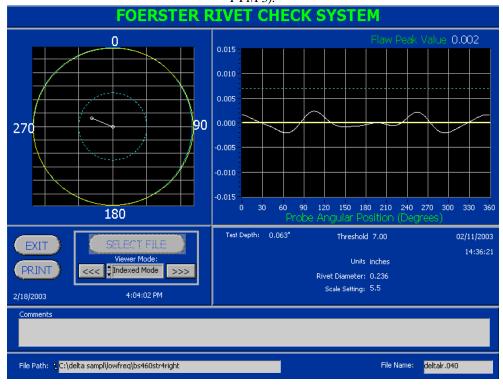


Figure E-40. Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #8 (Panel FT1/F3).

SHEET	E-43	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

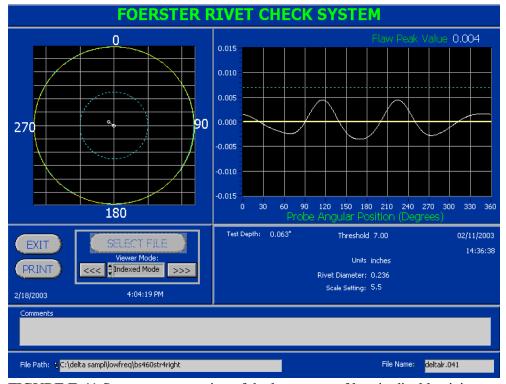


FIGURE E-41 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #9 (Panel FT1/F3).

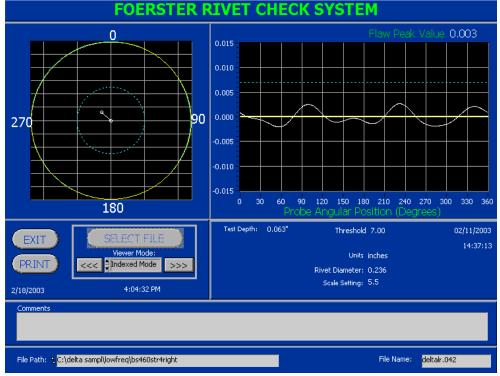


FIGURE E-42 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #10 (Panel FT1/F3).

SHEET	E-44	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

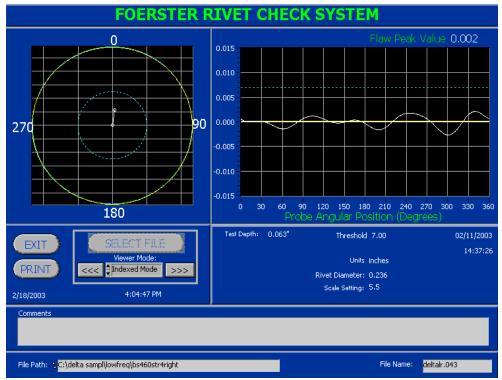


FIGURE E-43 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #11 (Panel FT1/F3).

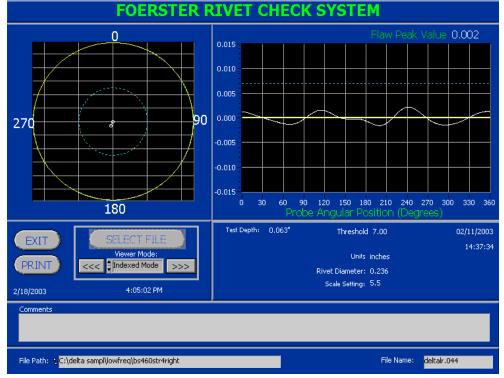


FIGURE E-44 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #12 (Panel FT1/F3).

SHEET	E-45	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

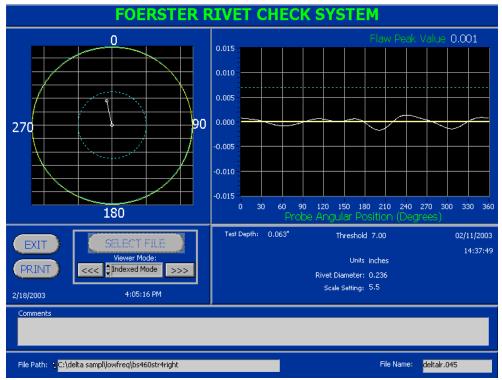


FIGURE E-45 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #13 (Panel FT1/F3).

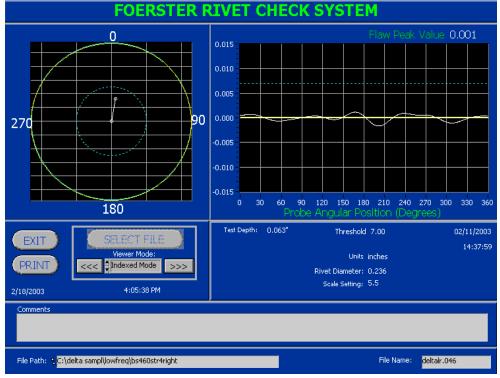


FIGURE E-46 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #14 (Panel FT1/F3).

SHEET	E-46	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

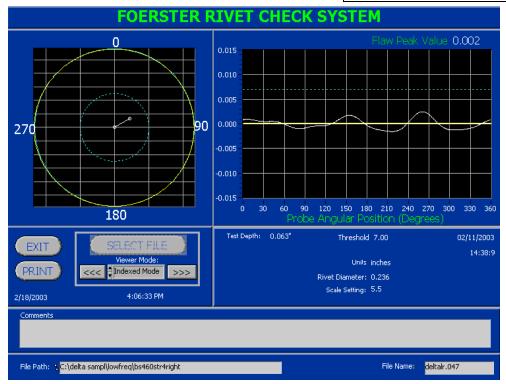


FIGURE E-47 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 500, rivet #15 (Panel FT1/F3).

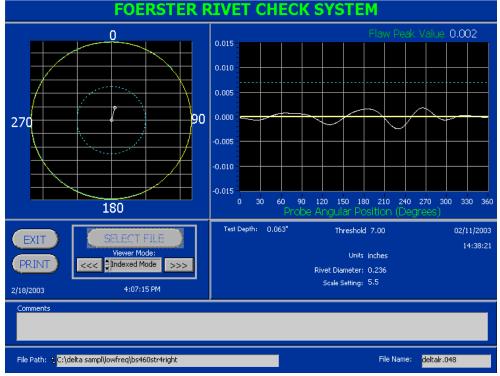


FIGURE E-48 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet at frame (Panel FT1/F3).

SHEET	E-47	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

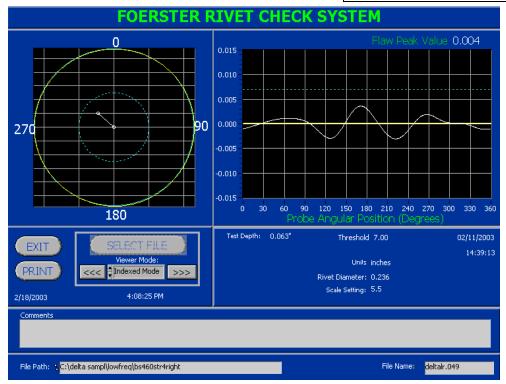


FIGURE E-49 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #1 (Panel FT1/F3).

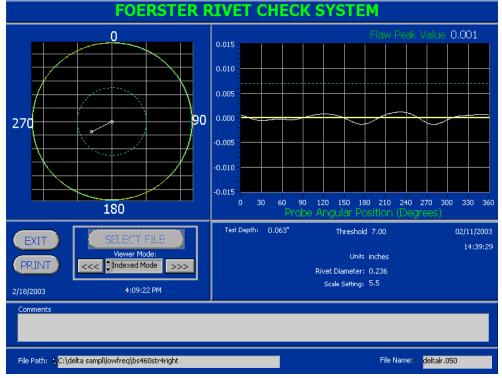


FIGURE E-50 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #2 (Panel FT1/F3).

SHEET	E-48	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

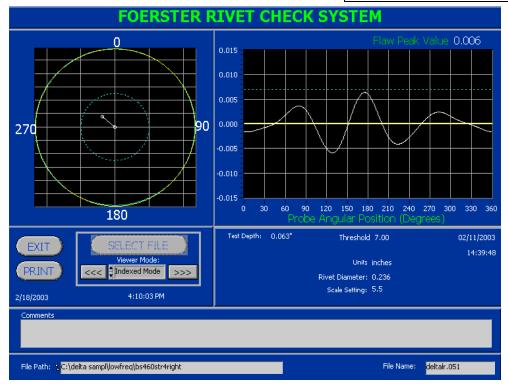


FIGURE E-51 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #3 (Panel FT1/F3).

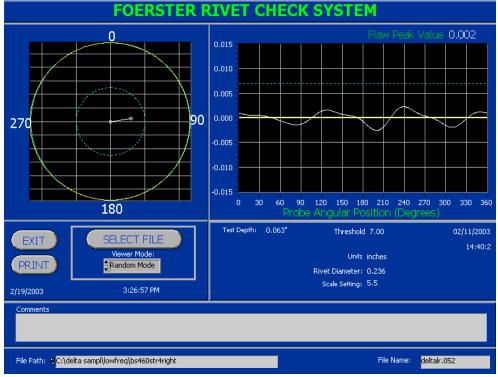


FIGURE E-52 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #4 (Panel FT1/F3).

SHEET	E-49	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

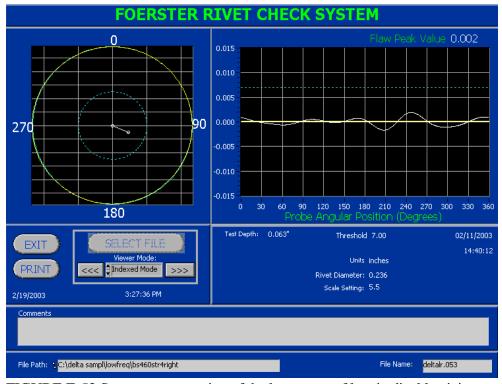


FIGURE E-53 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #5 (Panel FT1/F3).

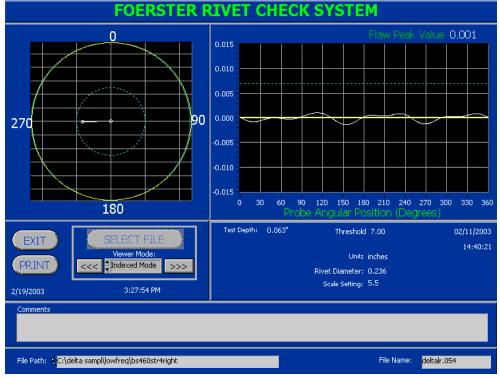


FIGURE E-54 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #6 (Panel FT1/F3).

SHEET	E-50	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

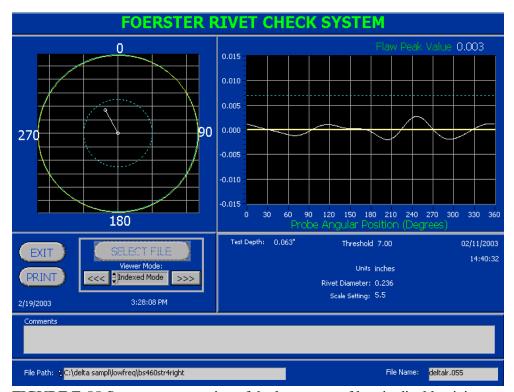


FIGURE E-55 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #7 (Panel FT1/F3).

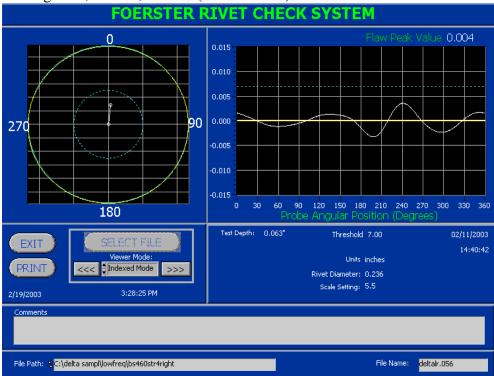


FIGURE E-56 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #8 (Panel FT1/F3).

SHEET	E-51	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

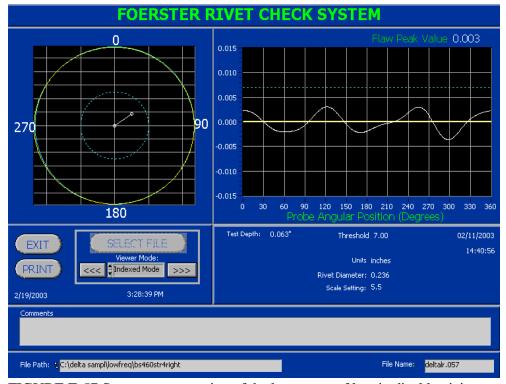


FIGURE E-57 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #9 (Panel FT1/F3).

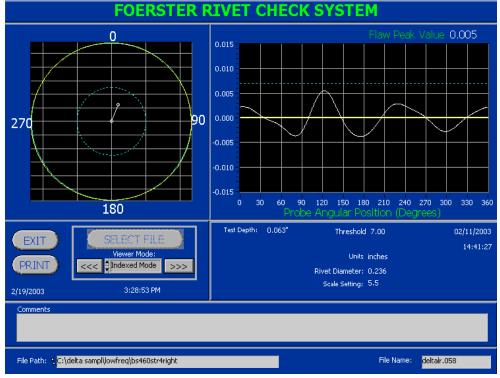


FIGURE E-58 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #10 (Panel FT1/F3).

SHEET	E-52	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

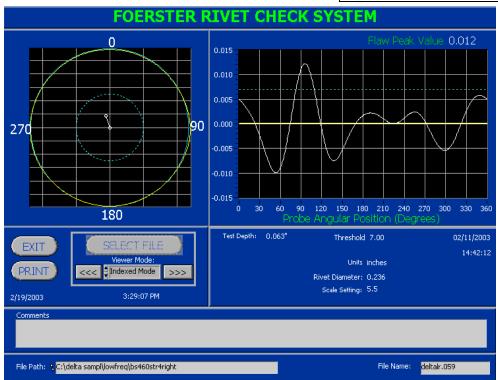


FIGURE E-59 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #11 (Panel FT1/F3).

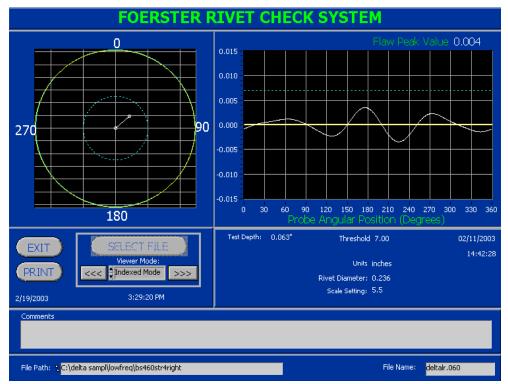


FIGURE E-60 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #12 (Panel FT1/F3).

SHEET	E-53	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

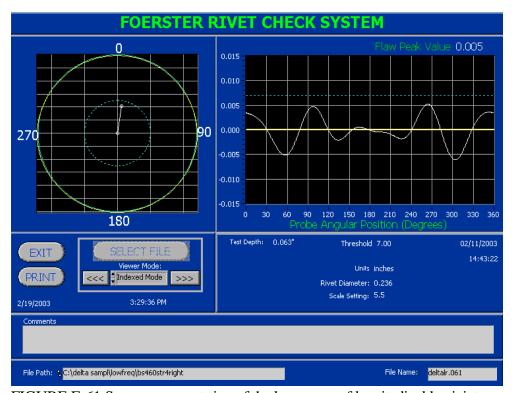


FIGURE E-61 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #13 (Panel FT1/F3).

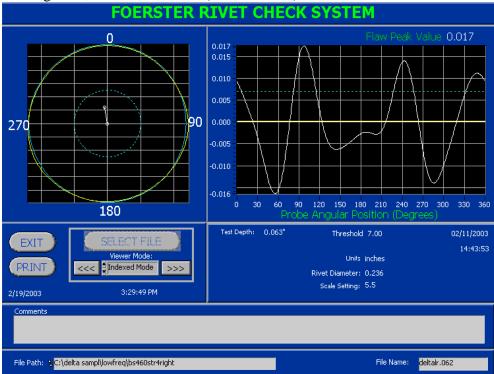


FIGURE E-62 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #14 (Panel FT1/F3).

SHEET	E-54	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

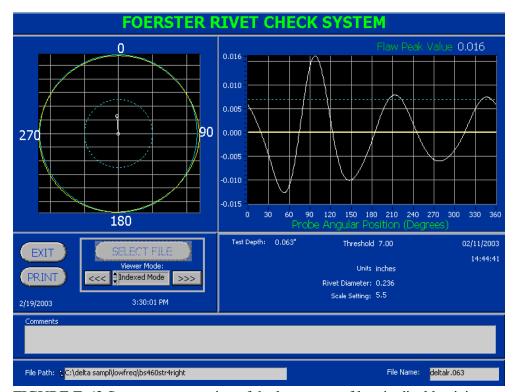


FIGURE E-63 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 520, rivet #15 (Panel FT1/F3).

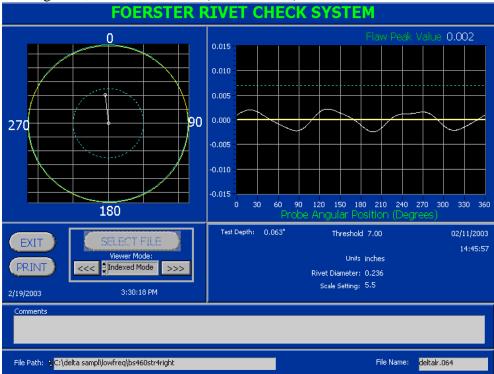


FIGURE E-64 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #1 (Panel FT1/F3).

SHEET	E-55	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

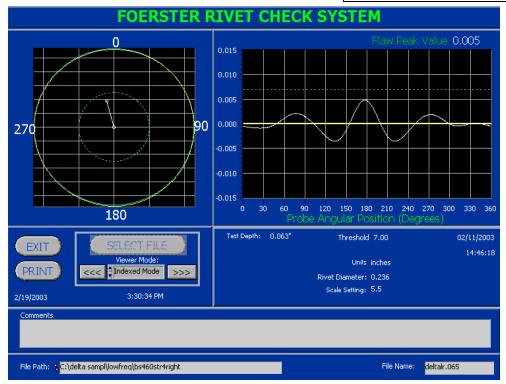


FIGURE E-65 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #2 (Panel FT1/F3).

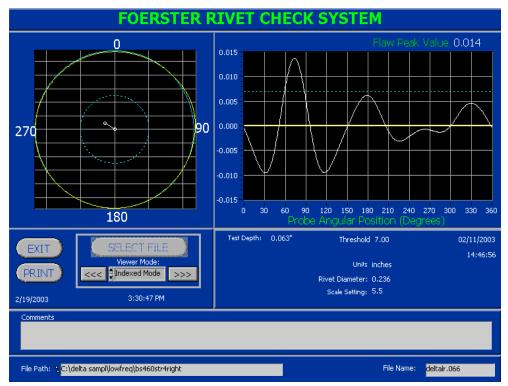


FIGURE E-66 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #3 (Panel FT1/F3).

SHEET	E-56	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

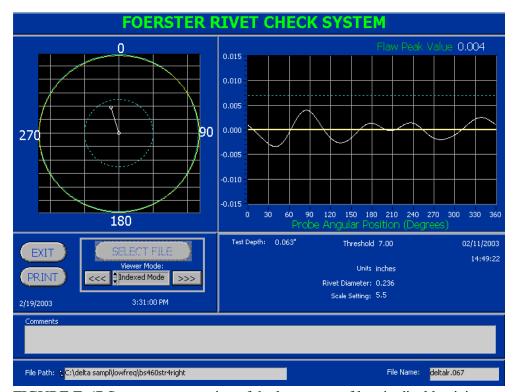


FIGURE E-67 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #4 (Panel FT1/F3).

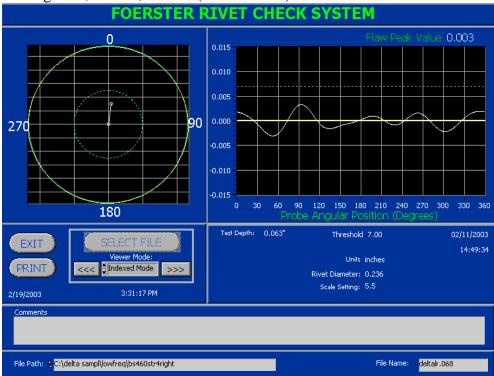


FIGURE E-68 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #5 (Panel FT1/F3).

SHEET	E-57	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

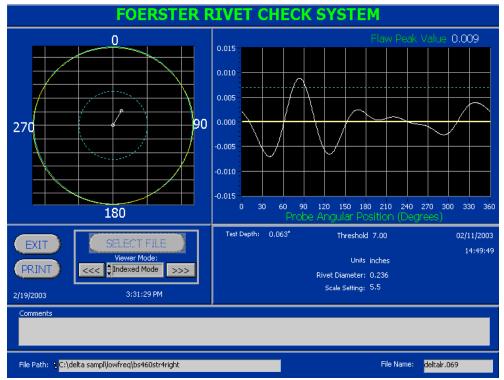


FIGURE E-69 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #6 (Panel FT1/F3).

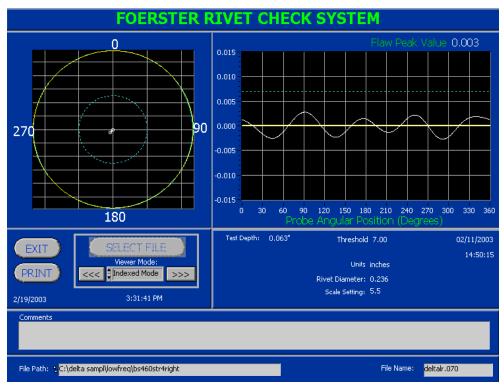


FIGURE E-70 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #7 (Panel FT1/F3).

SHEET	E-58	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

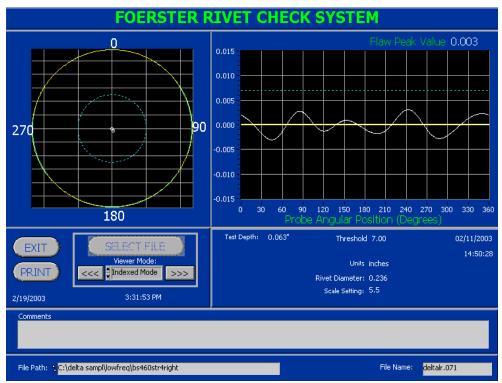


FIGURE E-71 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #8 (Panel FT1/F3).

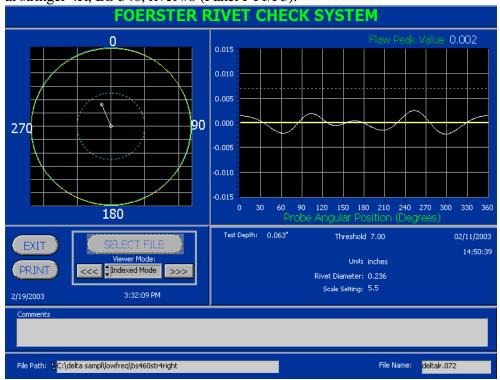


FIGURE E-72 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #9 (Panel FT1/F3).

SHEET	E-59	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

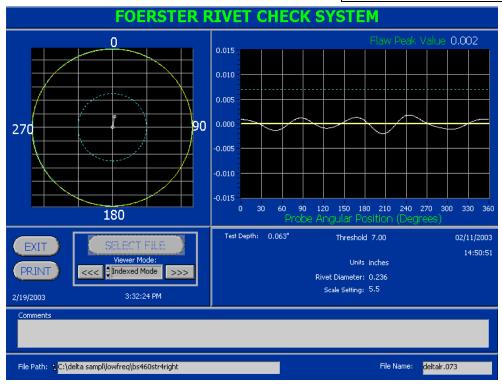


FIGURE E-73 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #10 (Panel FT1/F3).

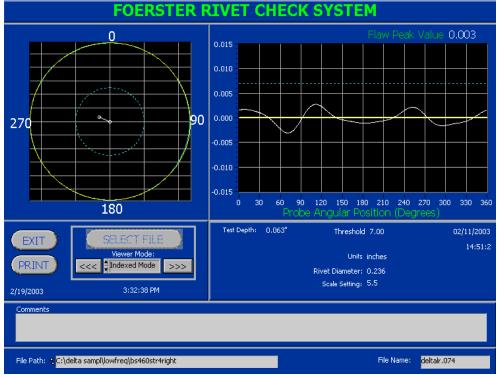


FIGURE E-74 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #11 (Panel FT1/F3).

SHEET	E-60	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

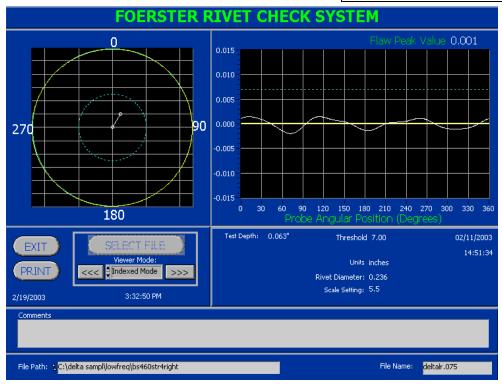


FIGURE E-75 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #12 (Panel FT1/F3).

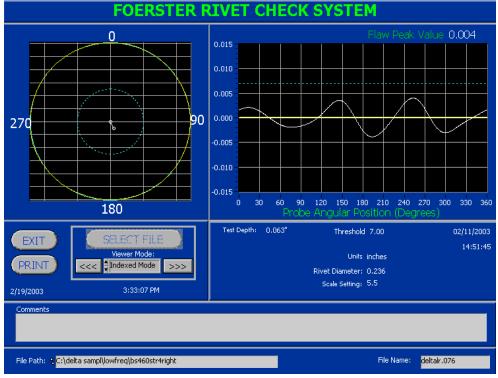


FIGURE E-76 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #13 (Panel FT1/F3).

SHEET	E-61	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

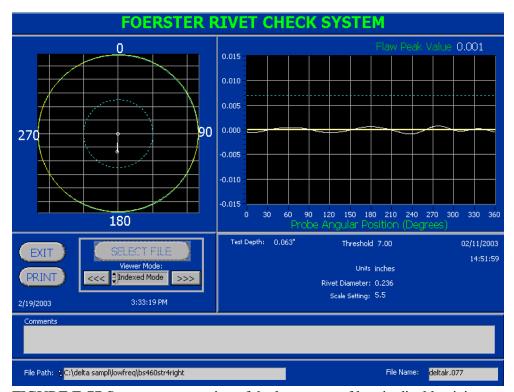


FIGURE E-77 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #14 (Panel FT1/F3).

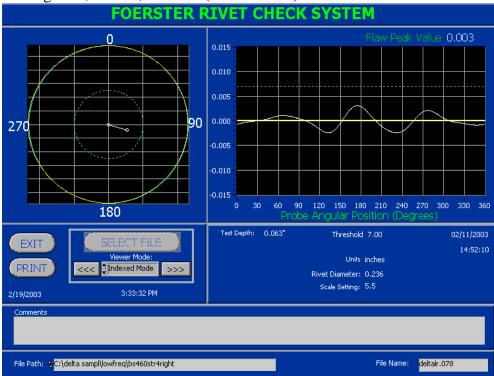


FIGURE E-78 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 540, rivet #15 (Panel FT1/F3).

SHEET	E-62	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

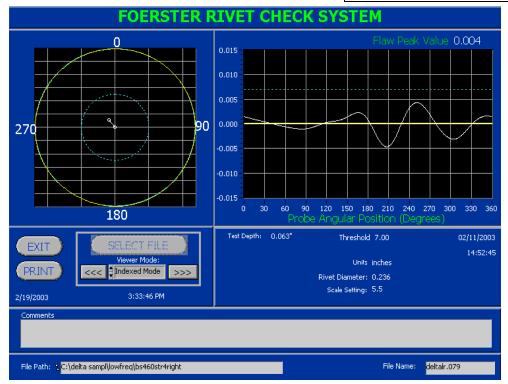


FIGURE E-79 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #1 (Panel FT1/F3).

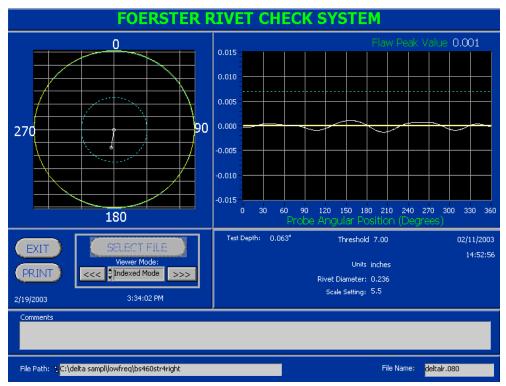


FIGURE E-80 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #2 (Panel FT1/F3).

SHEET	E-63	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

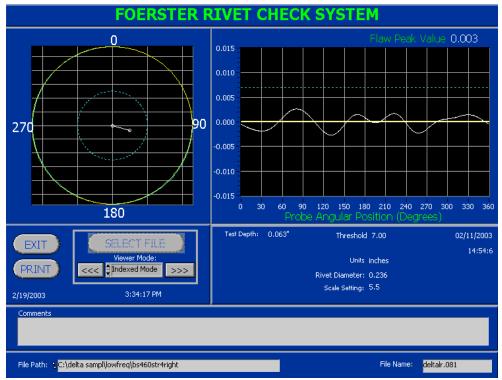


FIGURE E-81 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #1 (Panel FT1/F3).

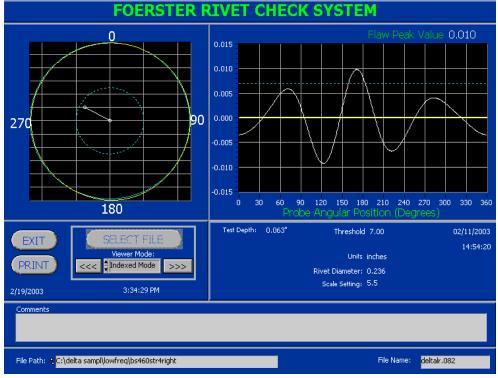


FIGURE E-82 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #2 (Panel FT1/F3).

SHEET	E-64	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

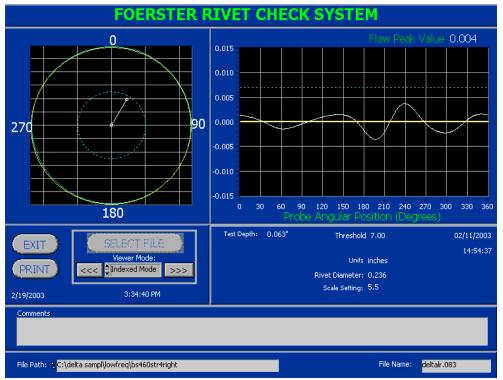


FIGURE E-83 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #3 (Panel FT1/F3).

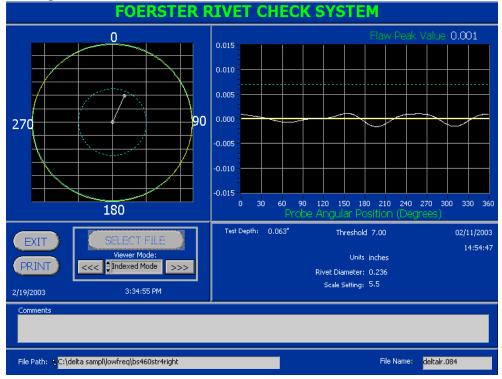


FIGURE E-84 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #4 (Panel FT1/F3).

SHEET	E-65	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

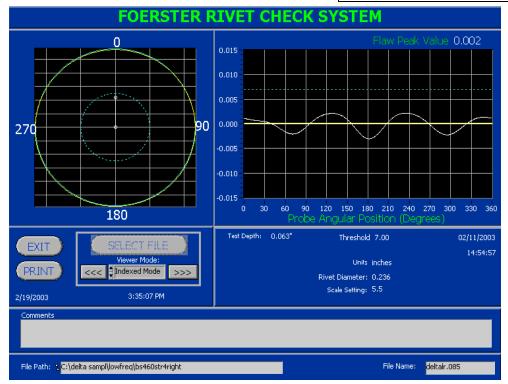


FIGURE E-85 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #5 (Panel FT1/F3).

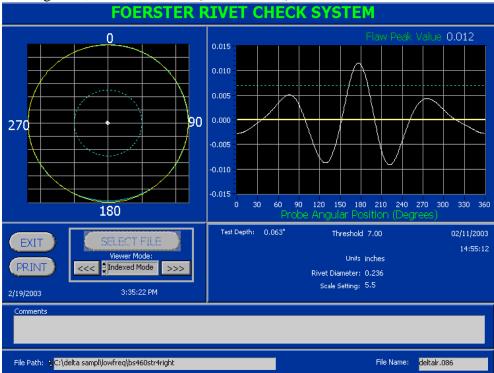


FIGURE E-86 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #6 (Panel FT1/F3).

SHEET	E-66	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

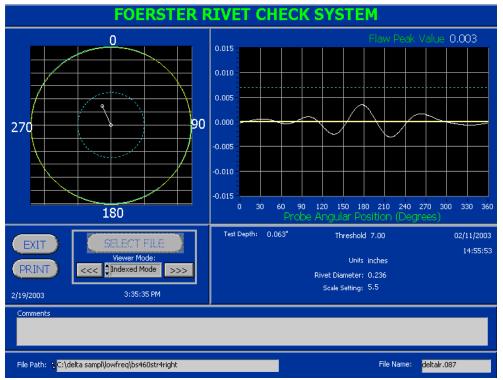


FIGURE E-87 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #7 (Panel FT1/F3).

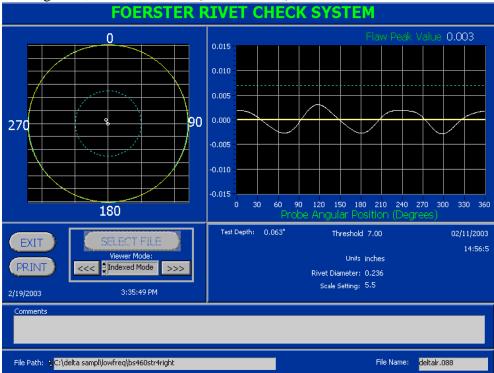


FIGURE E-88 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #8 (Panel FT1/F3).

SHEET	E-67	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

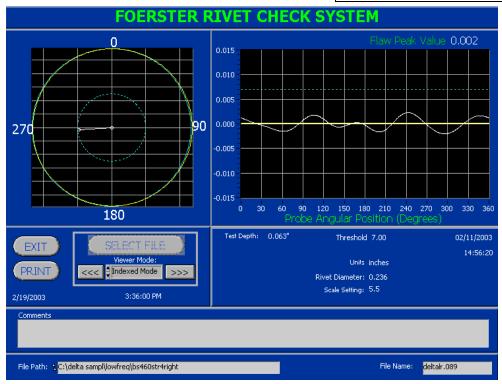


FIGURE E-89 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #9 (Panel FT1/F3).

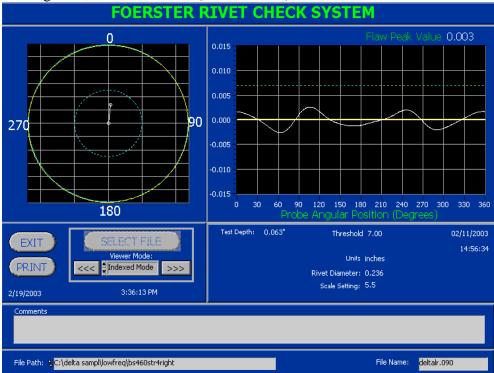


FIGURE E-90 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #10 (Panel FT1/F3).

SHEET	E-68	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

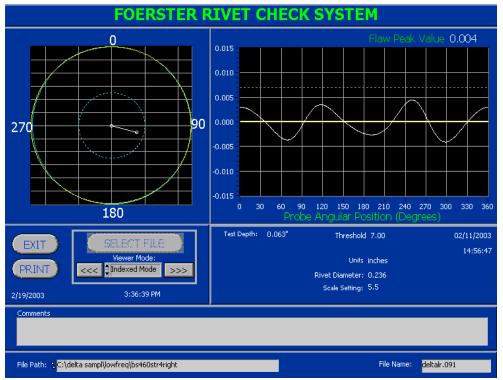


FIGURE E-91 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #11 (Panel FT1/F3).

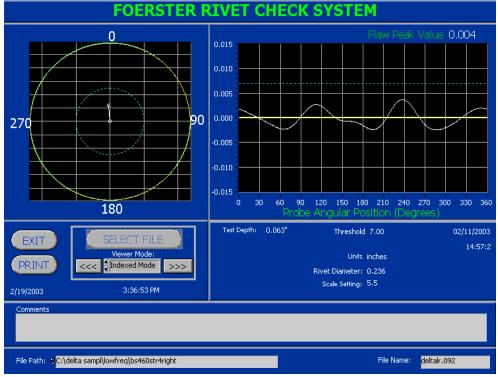


FIGURE E-92 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #12 (Panel FT1/F3).

SHEET	E-69	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

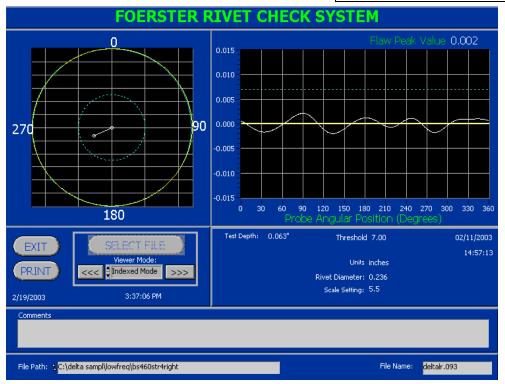


FIGURE E-93 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #13 (Panel FT1/F3).

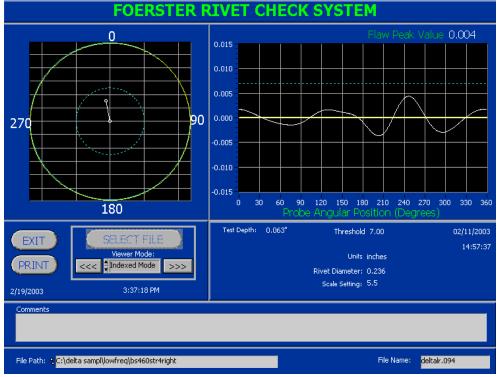


FIGURE E-94 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #14 (Panel FT1/F3).

SHEET	E-70	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

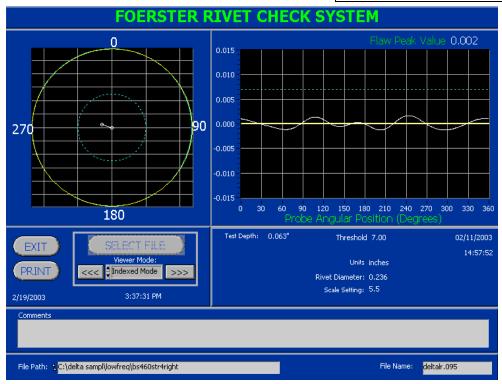


FIGURE E-95 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 560, rivet #15 (Panel FT1/F3).

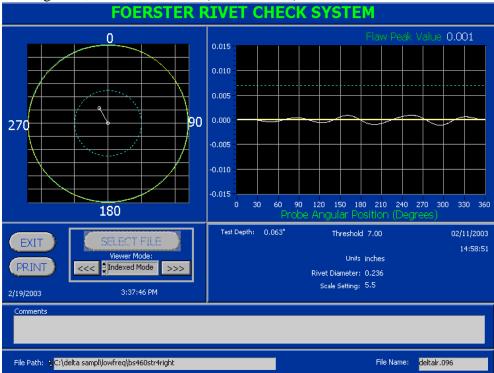


FIGURE E-96 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #1 (Panel FT1/F3).

SHEET	E-71	NO.	4-086624-20
TOTAL	E-153		
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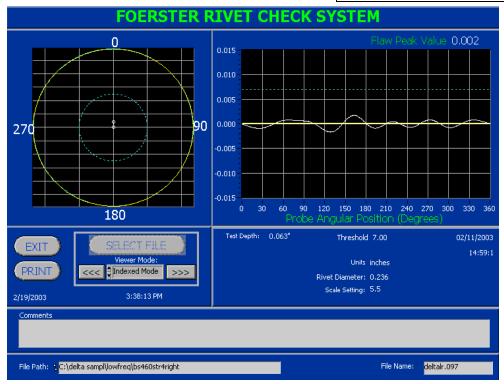


FIGURE E-97 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #2 (Panel FT1/F3).

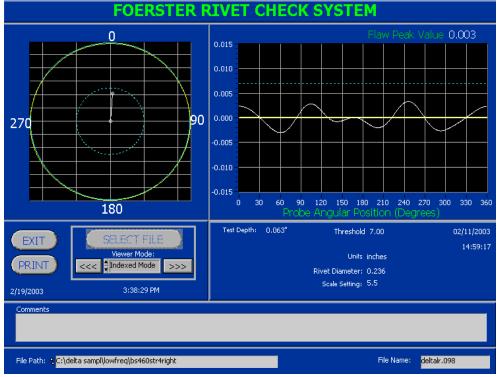


FIGURE E-98 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #3 (Panel FT1/F3).

SHEET	E-72	NO.	4-086624-20
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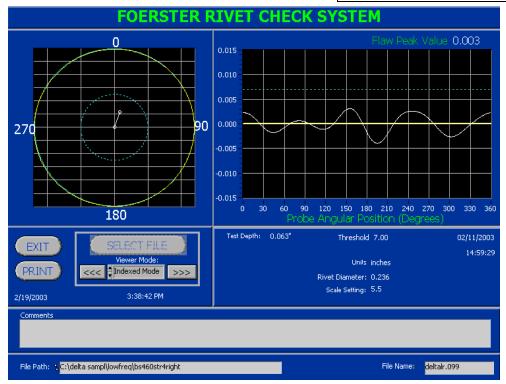


FIGURE E-99 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #4 (Panel FT1/F3).

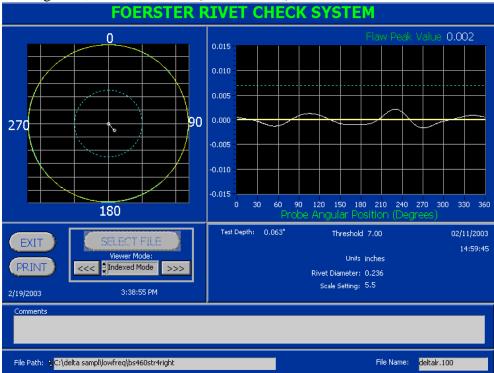


FIGURE E-100 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #5 (Panel FT1/F3).

SHEET	E-73	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

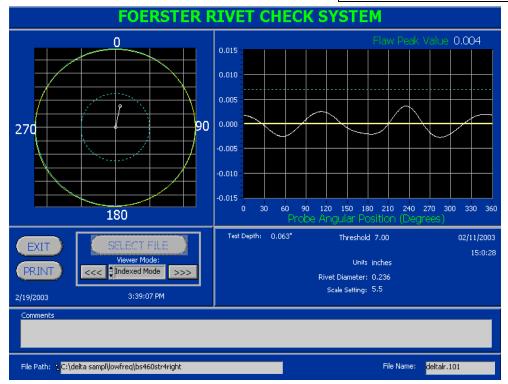


FIGURE E-101 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #6 (Panel FT1/F3).

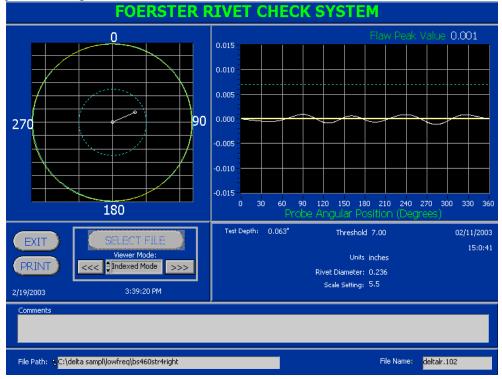


FIGURE E-102 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #7 (Panel FT1/F3).

SHEET	E-74	NO.	4-086624-20
TOTAL	E-153		
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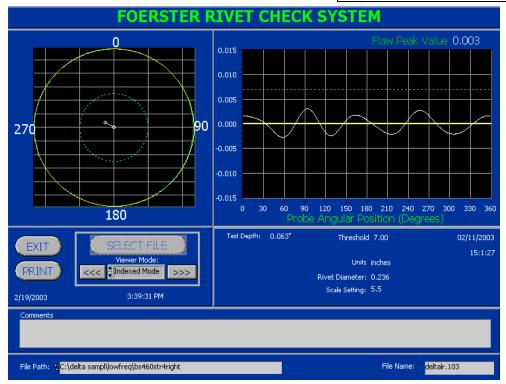


FIGURE E-103 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #8 (Panel FT1/F3).

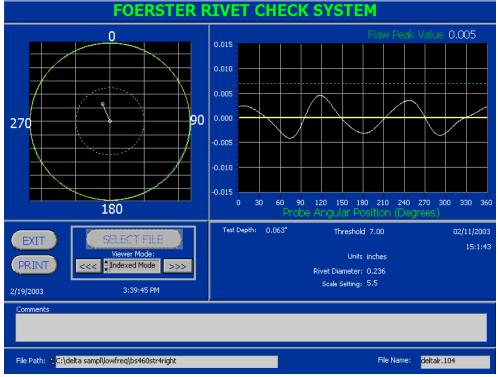


FIGURE E-104 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #9 (Panel FT1/F3).

SHEET	E-75	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

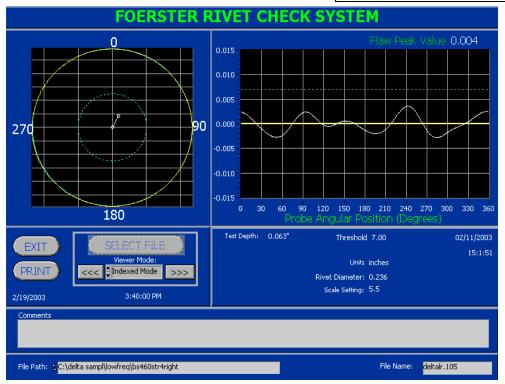


FIGURE E-105 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #10 (Panel FT1/F3).

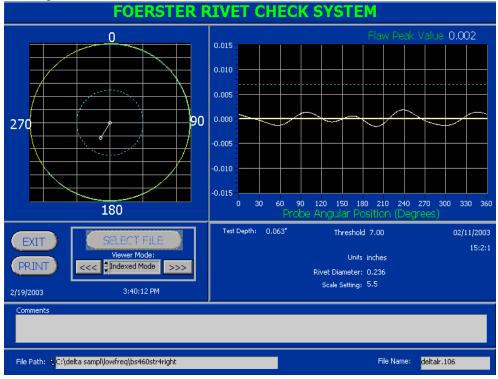


FIGURE E-106 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #11 (Panel FT1/F3).

SHEET	E-76	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

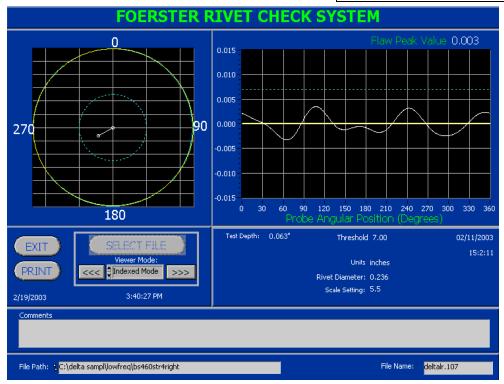


FIGURE E-107 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #12 (Panel FT1/F3).

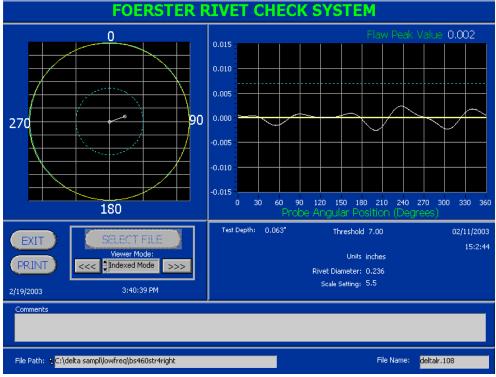


FIGURE E-108 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #13 (Panel FT1/F3).

SHEET	E-77	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

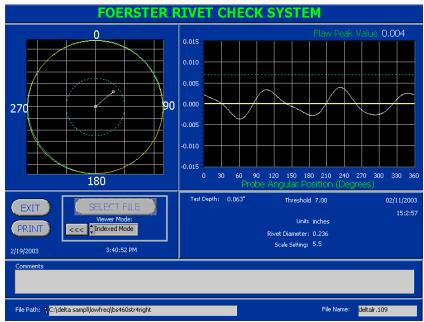
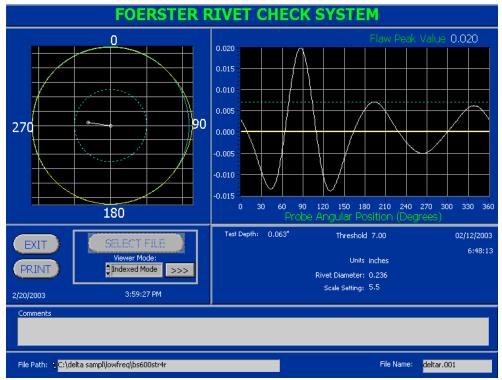


FIGURE E-109 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 580, rivet #14 (Panel FT1/F3).

SHEET	E-78	NO.	4-086624-20
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E-110 Screen representation of the reference standard calibration using a 0.100" EDM Notch in 0.050"/0.040" stack-up (Panel FT2/F4).

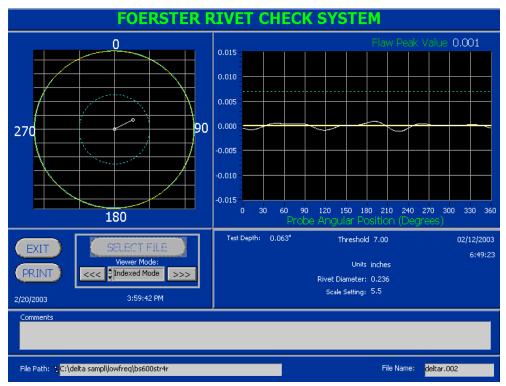
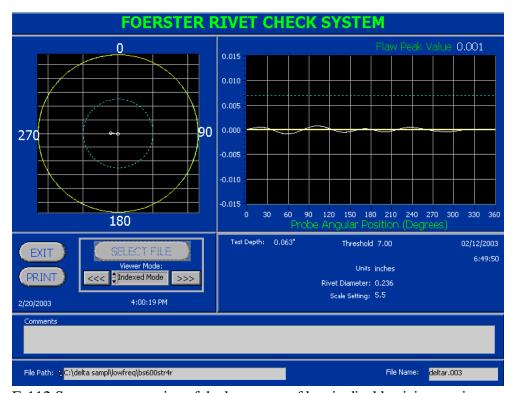


FIGURE E-111 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #1(Panel FT2/F4).

SHEET	E-79	NO.	4-086624-20
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E-112 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #2 (Panel FT2/F4).

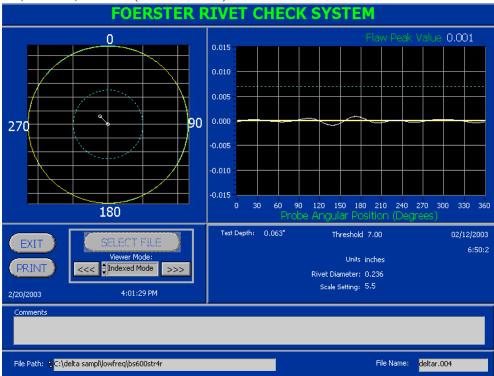


FIGURE E-113 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #3 (Panel FT2/F4).

SHEET	E-80	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

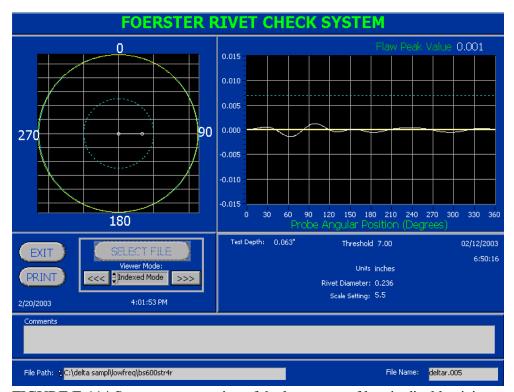


FIGURE E-114 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #4 (Panel FT2/F4).

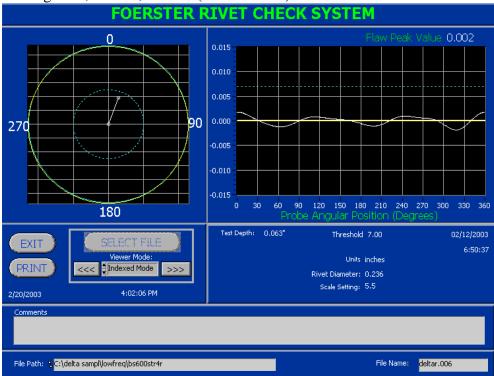


FIGURE E-115 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #5 (Panel FT2/F4).

SHEET	E-81	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

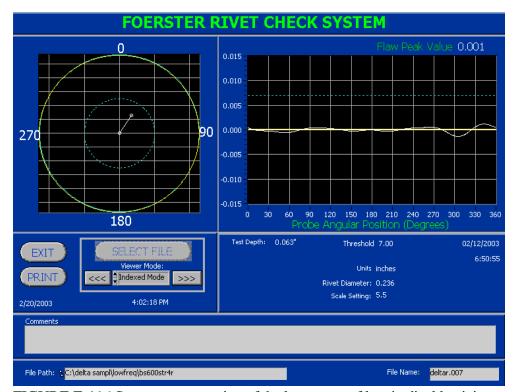
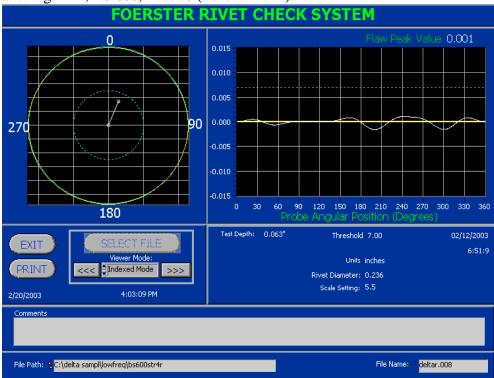


FIGURE E-116 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #6 (Panel FT2/F4).



E-117 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #7 (Panel FT2/F4).

SHEET	E-82	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

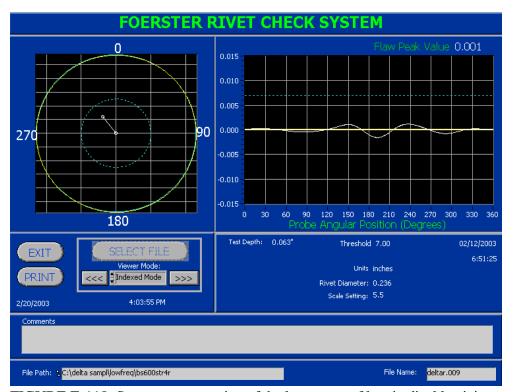


FIGURE E-118 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #8 (Panel FT2/F4).

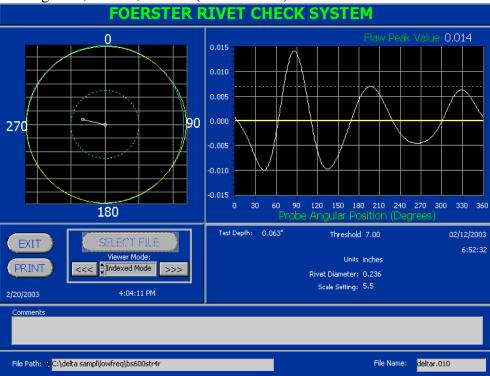


FIGURE E-119 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #9 (Panel FT2/F4).

SHEET	E-83	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

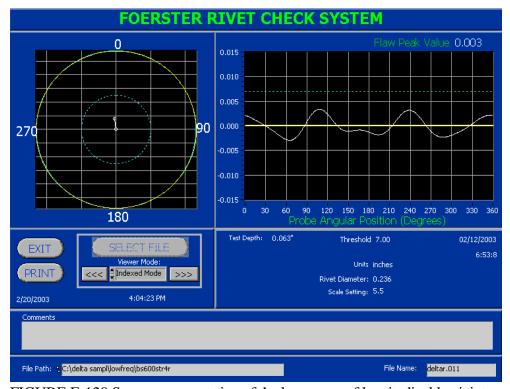


FIGURE E-120 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #10 (Panel FT2/F4).

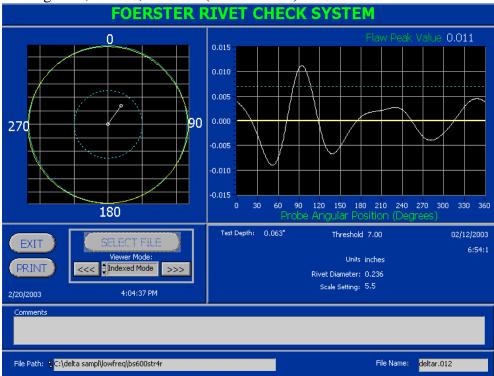


FIGURE E-121 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #11 ((Panel FT2/F4).

SHEET	E-84	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

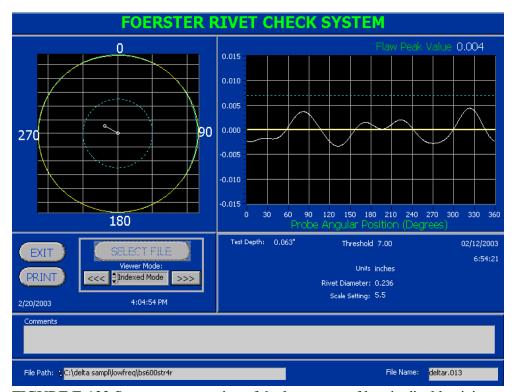


FIGURE E-122 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #12 (Panel FT2/F4).

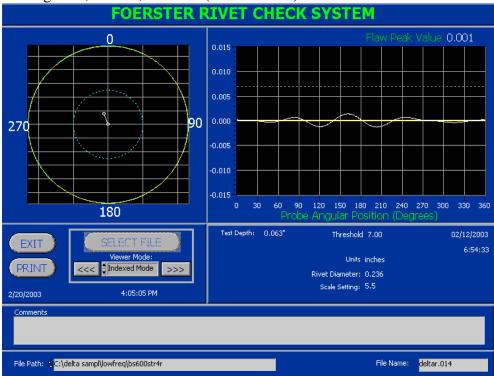


FIGURE E-123 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #13 (Panel FT2/F4).

SHEET	E-85	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

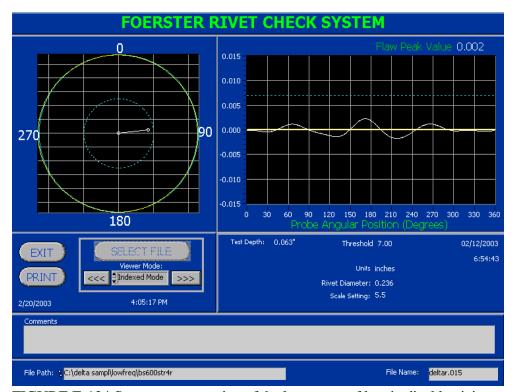


FIGURE E-124 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #14 (Panel FT2/F4).

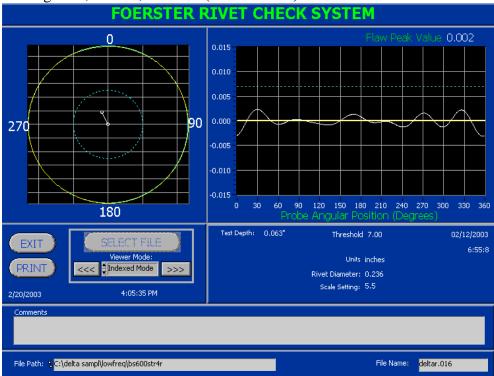


FIGURE E-125 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 600, rivet #15 (Panel FT2/F4).

SHEET	E-86	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

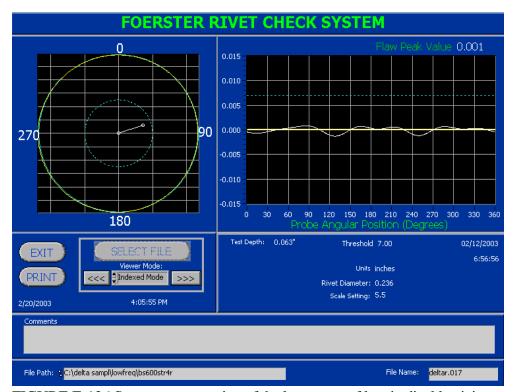


FIGURE E-126 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #1 (Panel FT2/F4).

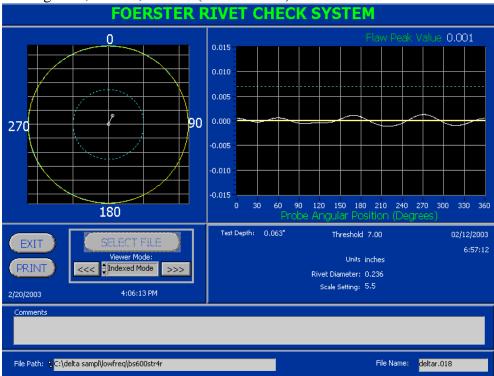


FIGURE E-127 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #2 (Panel FT2/F4).

SHEET	E-87	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

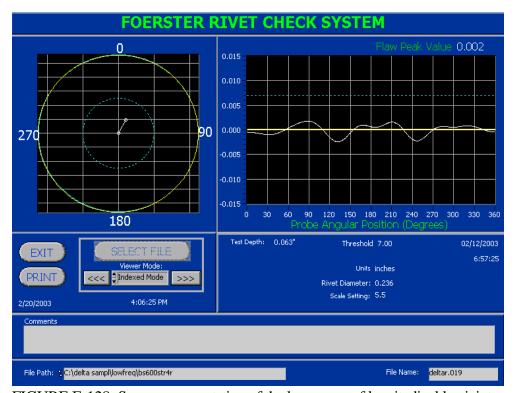


FIGURE E-128 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #3 (Panel FT2/F4).

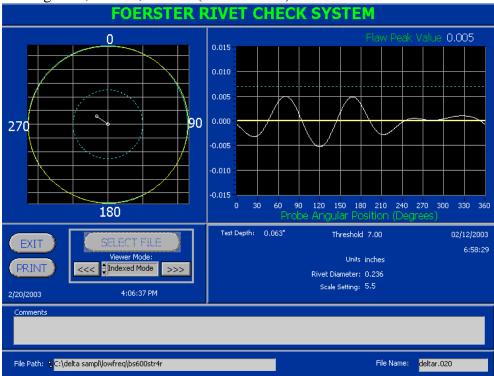


FIGURE E-129 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #4 (Panel FT2/F4).

SHEET	E-88	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

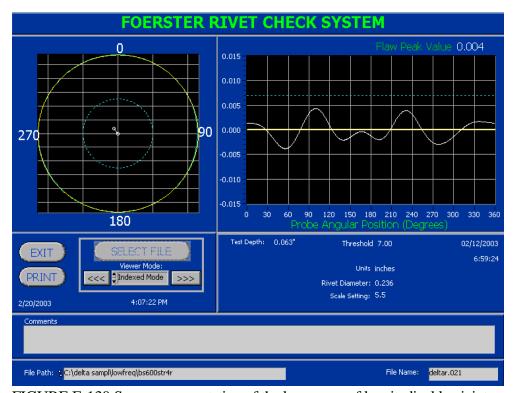


FIGURE E-130 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #5 (Panel FT2/F4).

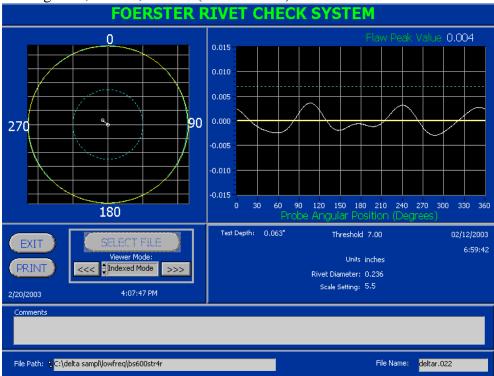


FIGURE E-131 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #6 (Panel FT2/F4).

SHEET	E-89	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

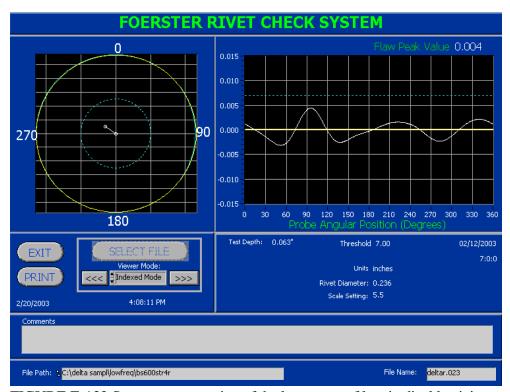


FIGURE E-132 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #7 (Panel FT2/F4).

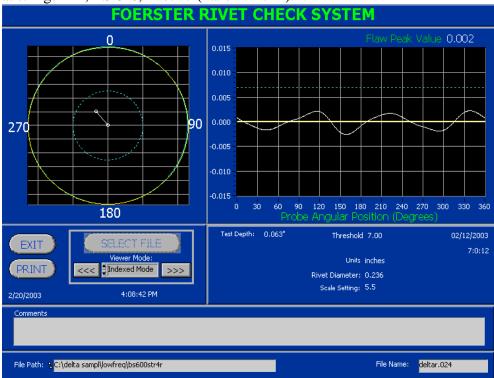


FIGURE E-133 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #8 (Panel FT2/F4).

SHEET	E-90	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

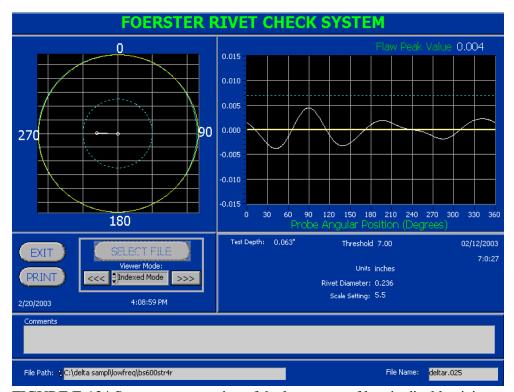


FIGURE E-134 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #9 (Panel FT2/F4).

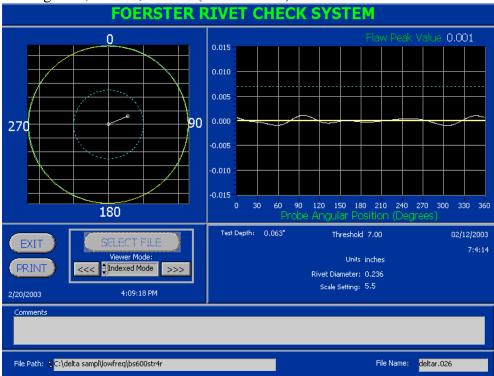


FIGURE E-135 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #10 (Panel FT2/F4).

SHEET	E-91	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

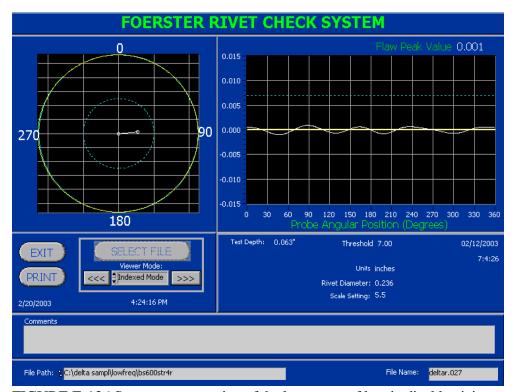


FIGURE E-136 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #11(Panel FT2/F4).

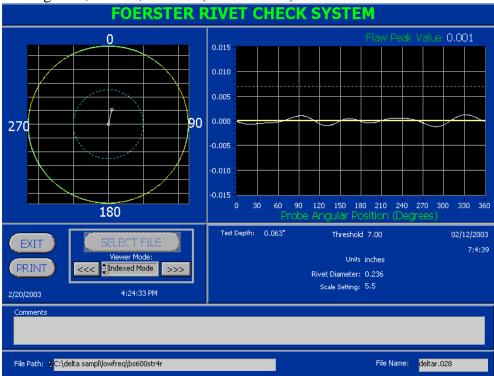


FIGURE E-137 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #12 (Panel FT2/F4).

SHEET	E-92	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

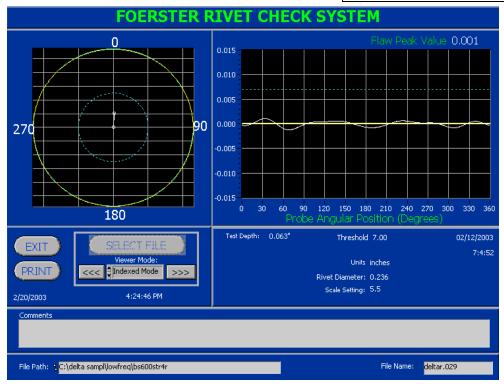


FIGURE E-138 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #13 (Panel FT2/F4).

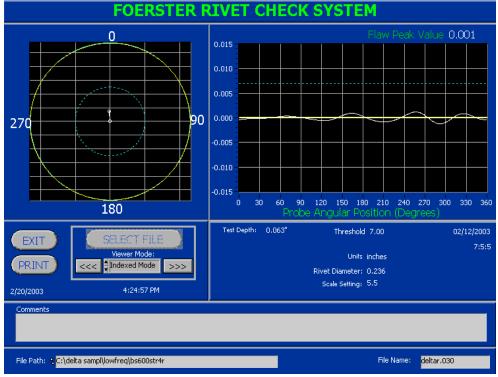


FIGURE E-139 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #14 (Panel FT2/F4).

SHEET	E-93	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

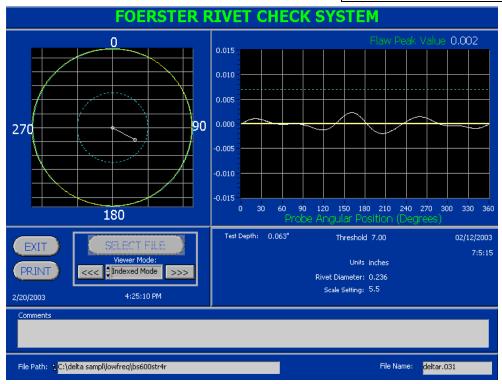


FIGURE E-140 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 620, rivet #15 (Panel FT2/F4).

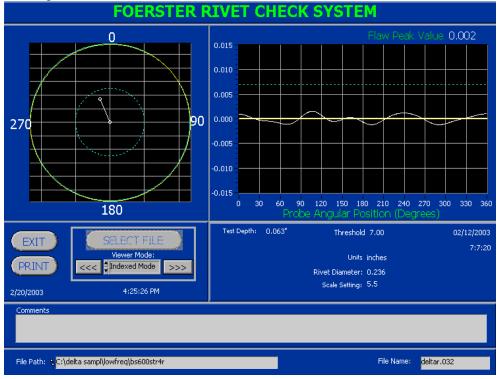


FIGURE E-141 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #1 (Panel FT2/F4).

SHEET	E-94	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

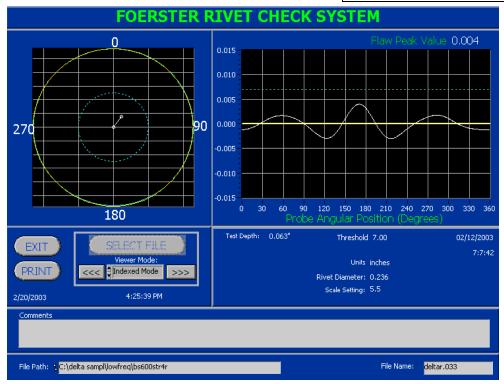


FIGURE E-142 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #2 (Panel FT2/F4).

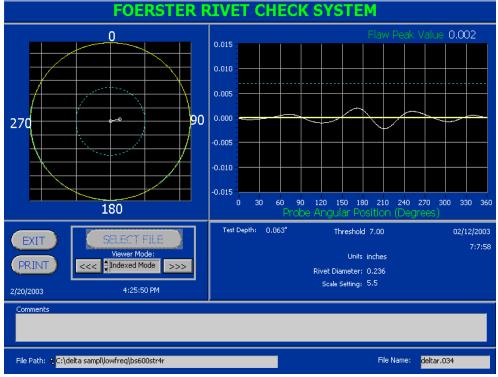
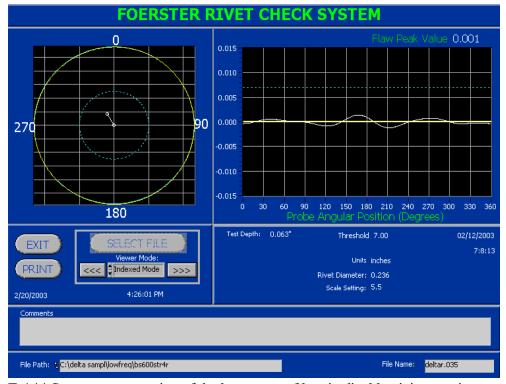


FIGURE E-143 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #3 (Panel FT2/F4).

SHEET	E-95	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003



E-144 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #4 (Panel FT2/F4).

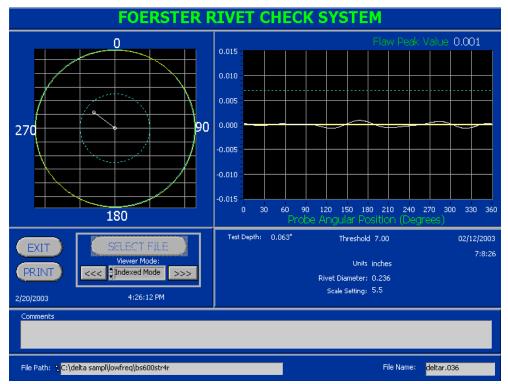


FIGURE E-145 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #5 (Panel FT2/F4).

SHEET	E-96	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

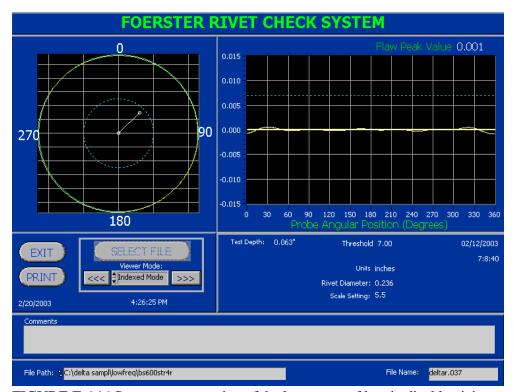


FIGURE E-146 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #6 (Panel FT2/F4).

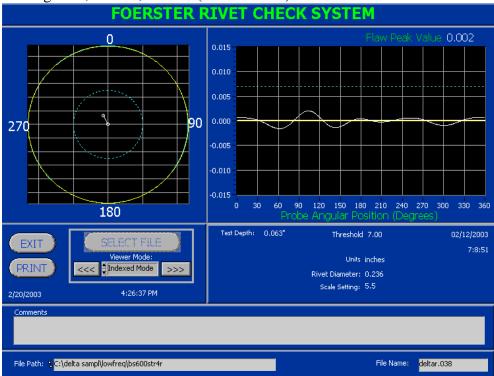


FIGURE E-147 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #7 (Panel FT2/F4).

SHEET	E-97	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

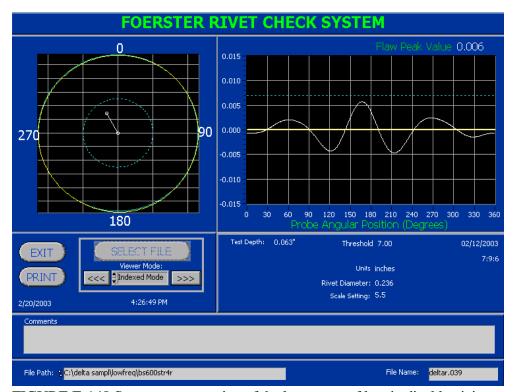


FIGURE E-148 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #8 (Panel FT2/F4).

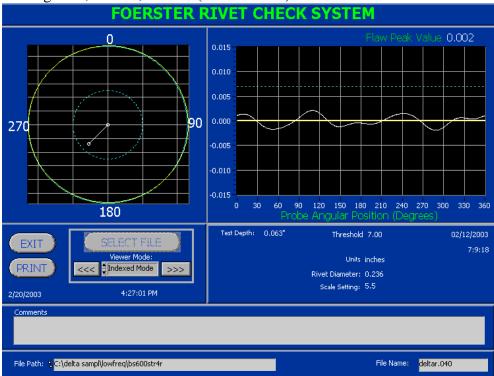


FIGURE E-149 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #9 (Panel FT2/F4).

SHEET	E-98	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

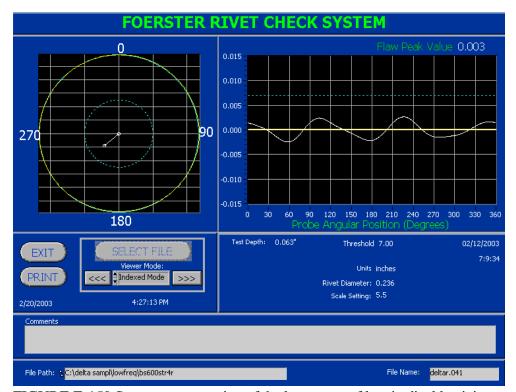


FIGURE E-150 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #10 (Panel FT2/F4).

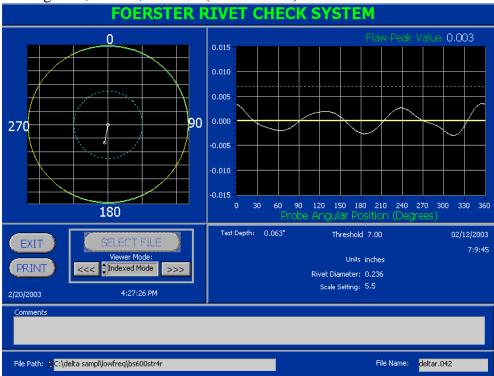


FIGURE E-151 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #11 (Panel FT2/F4).

SHEET	E-99	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

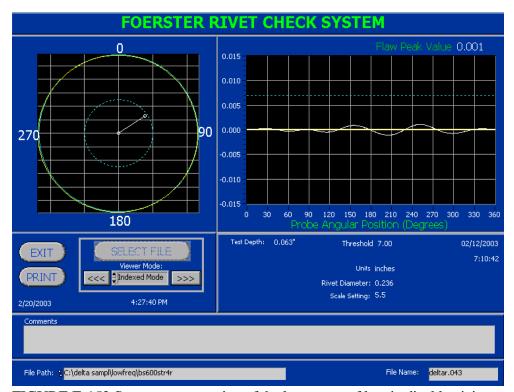


FIGURE E-152 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #12 (Panel FT2/F4).

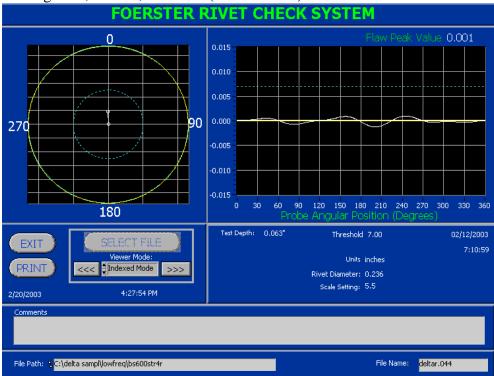


FIGURE E-153 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #13 (Panel FT2/F4).

SHEET	E-100	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

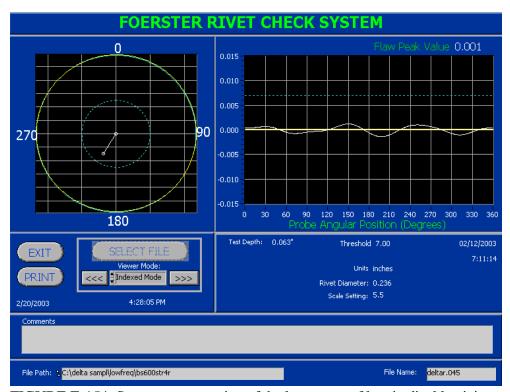


FIGURE E-154 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #14 (Panel FT2/F4).

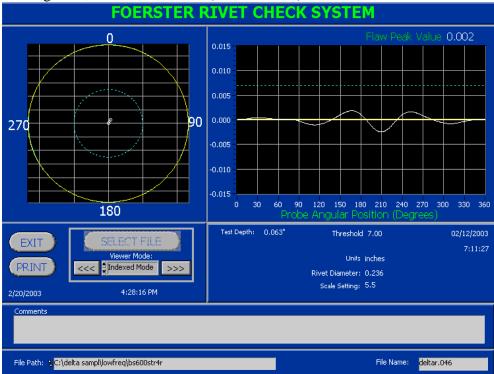


FIGURE E-155 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 640, rivet #15 (Panel FT2/F4).

SHEET	E-101	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

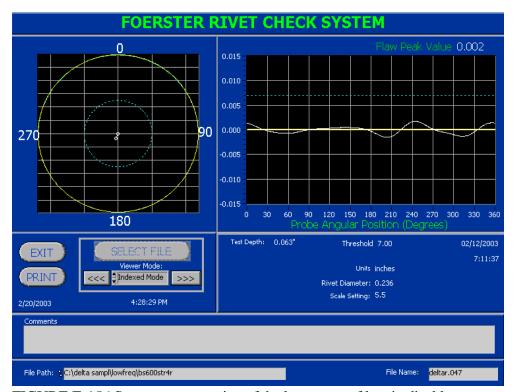


FIGURE E-156 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet at frame (Panel FT2/F4).

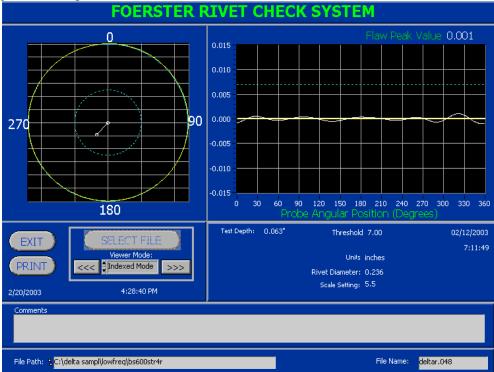


FIGURE E-157 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet at frame (Panel FT2/F4).

SHEET	E-102	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

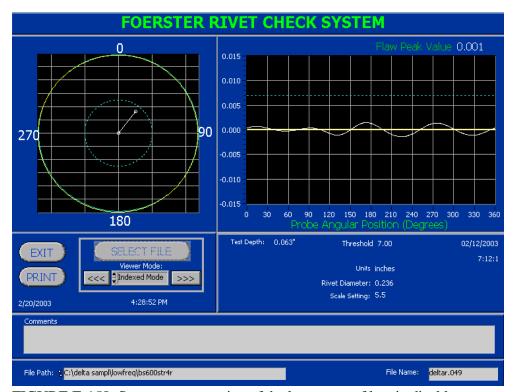


FIGURE E-158 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet at frame (Panel FT2/F4).

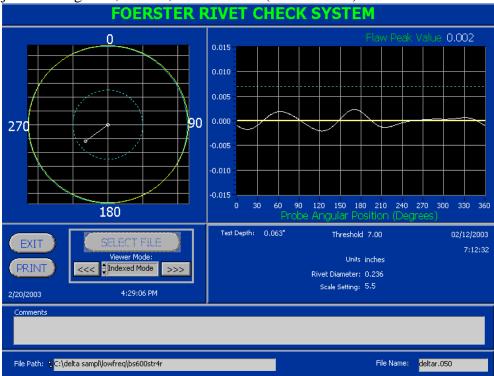


FIGURE E-159 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #1 (Panel FT2/F4).

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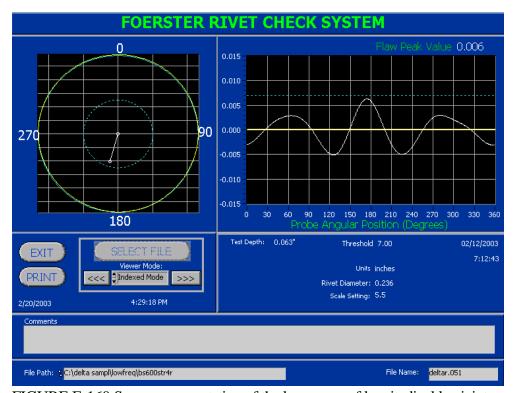


FIGURE E-160 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #2 (Panel FT2/F4).

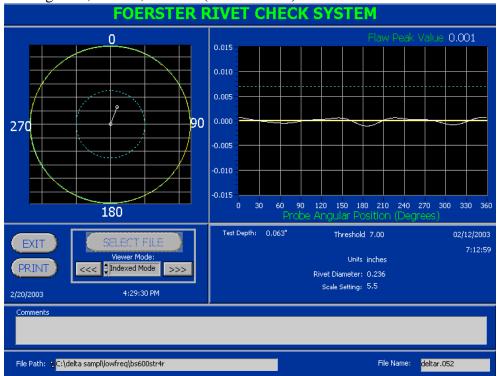


FIGURE E-161 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #3 (Panel FT2/F4).

SHEET	E-104	NO.	4-086624-20
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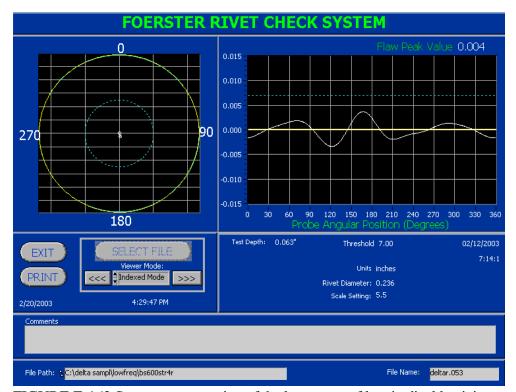


FIGURE E-162 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #4 (Panel FT2/F4).

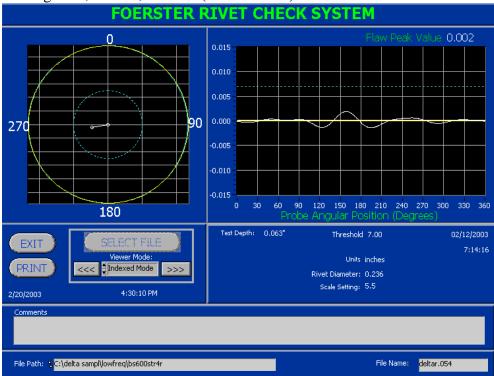


FIGURE E-163 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #5 (Panel FT2/F4).

SHEET	E-105	NO.	4-086624-20
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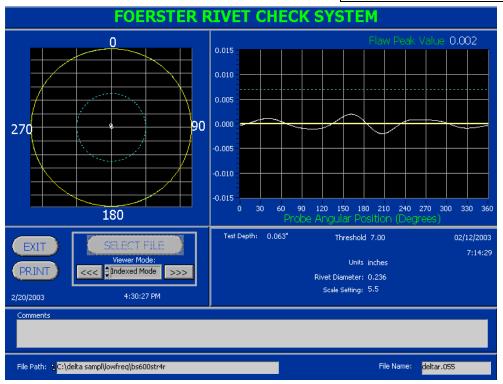


FIGURE E-164 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #6 (Panel FT2/F4).

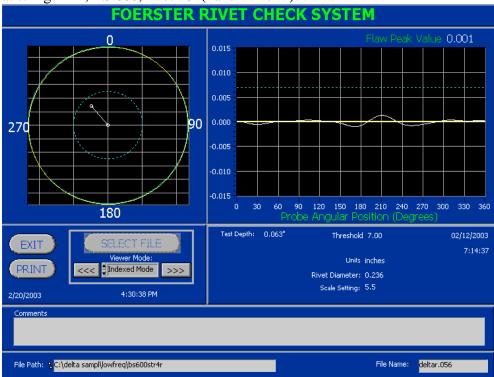


FIGURE E-165 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #7 (Panel FT2/F4).

SHEET	E-106	NO.	4-086624-20
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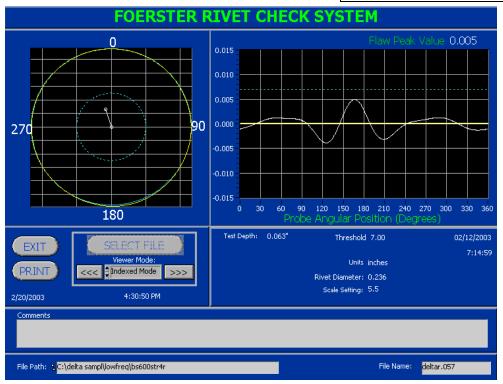


FIGURE E-166 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #8 (Panel FT2/F4).

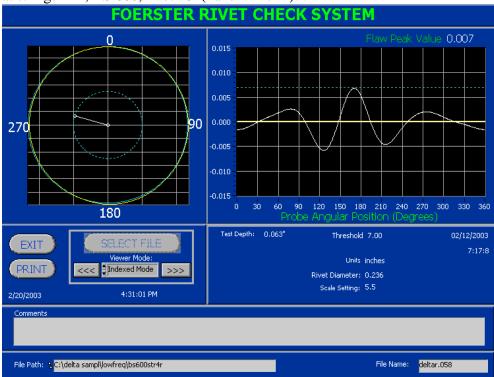


FIGURE E-167 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #8 (Panel FT2/F4).

SHEET	E-107	NO.	4-086624-20
TOTAL	E-153		
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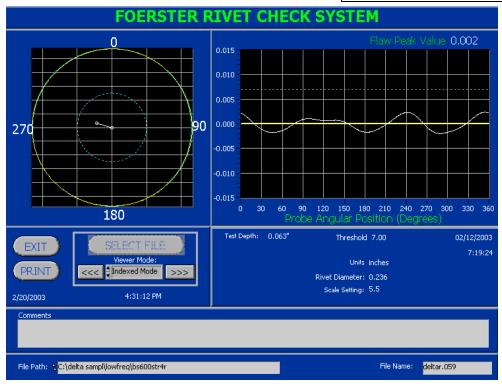


FIGURE E-168 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #9 (Panel FT2/F4).

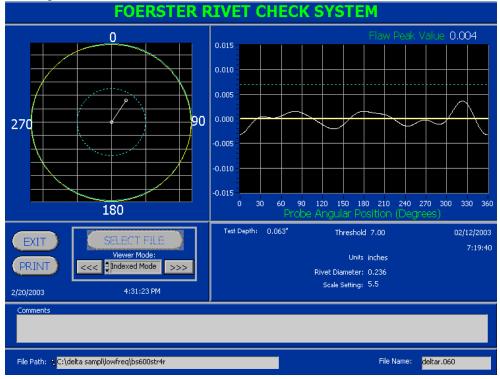


FIGURE E-169 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #10 (Panel FT2/F4).

SHEET	E-108	NO.	4-086624-20
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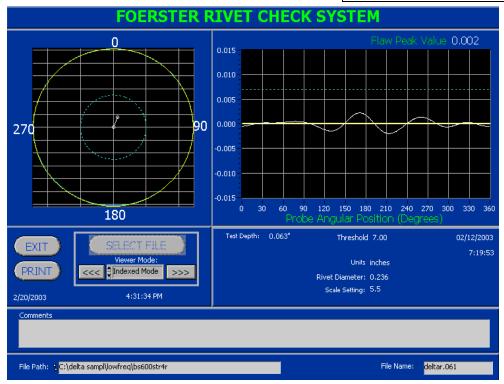


FIGURE E-170 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #11 (Panel FT2/F4).

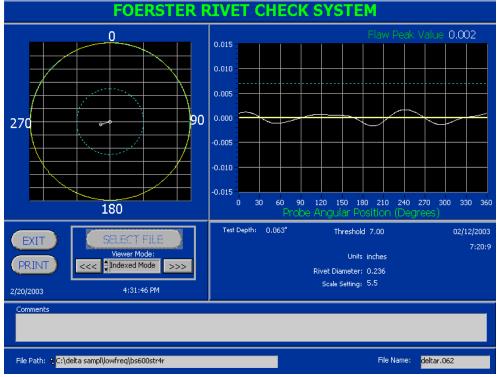


FIGURE E-171 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #12 (Panel FT2/F4).

SHEET	E-109	NO.	4-086624-20
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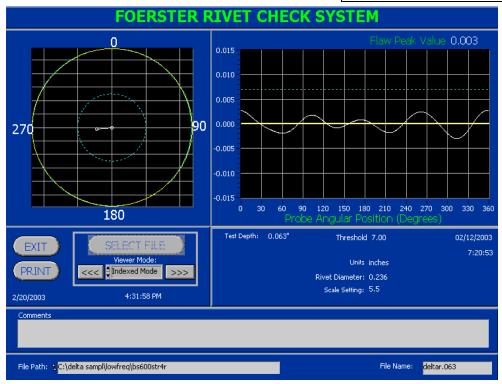


FIGURE E-172 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #13 (Panel FT2/F4).

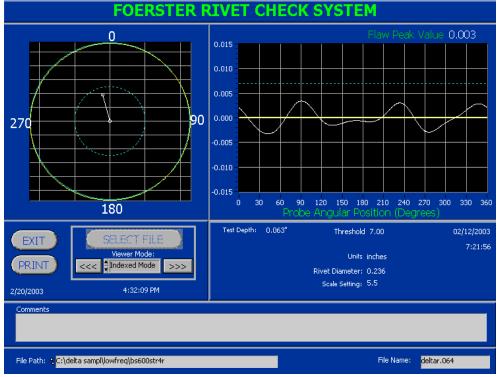


FIGURE E-173 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #14 (Panel FT2/F4).

SHEET	E-110	NO.	4-086624-20
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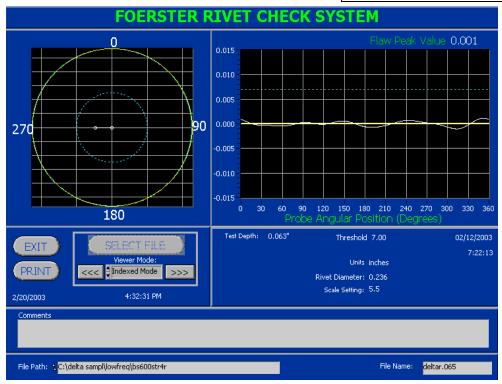


FIGURE E-174 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #15 (Panel FT2/F4).

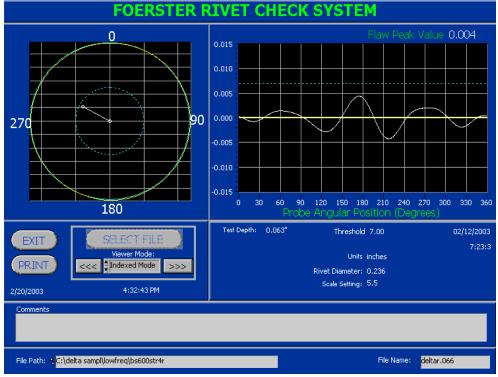


FIGURE E-175 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 660, rivet #16 (Panel FT2/F4).

SHEET	E-111	NO.	4-086624-20
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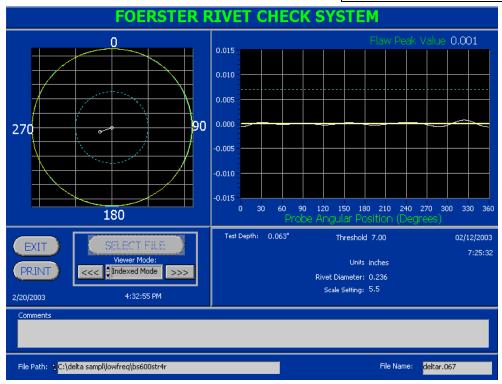


FIGURE E-176 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #1 (Panel FT2/F4).

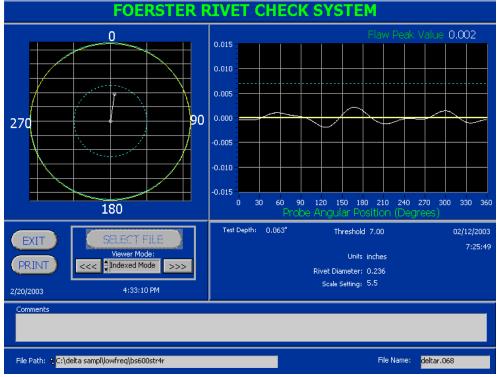


FIGURE E-177 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #2 (Panel FT2/F4).

SHEET	E-112	NO.	4-086624-20
TOTAL	E-153		
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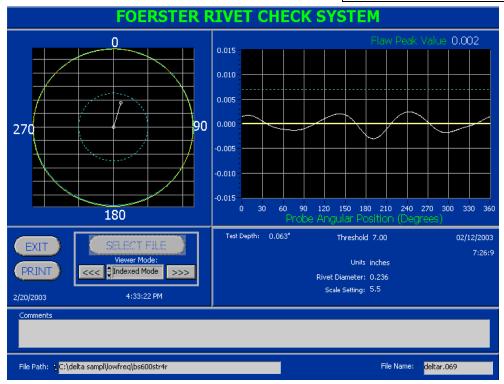


FIGURE E-178 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #3 (Panel FT2/F4).

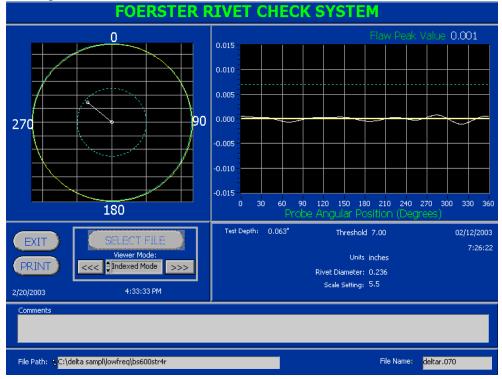


FIGURE E-179 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #4 (Panel FT2/F4).

SHEET	E-113	NO.	4-086624-20
TOTAL	E-153		
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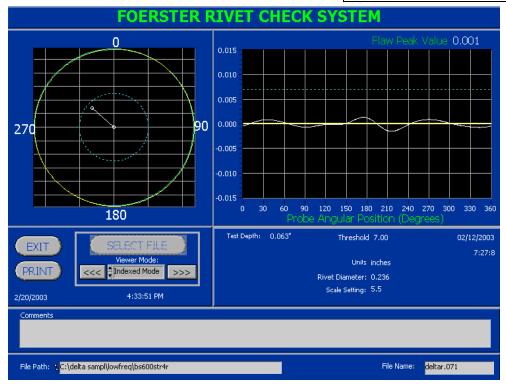


FIGURE E-180 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #5 (Panel FT2/F4).

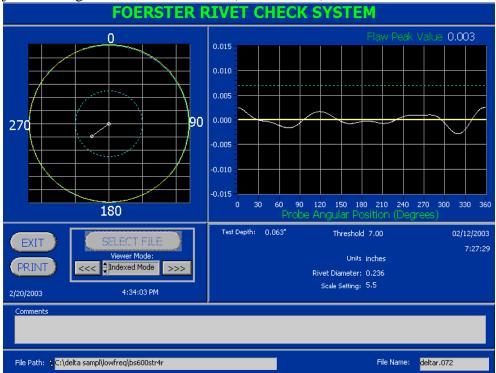


FIGURE E-181 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #6 (Panel FT2/F4).

SHEET	E-114	NO.	4-086624-20
TOTAL	E-153		
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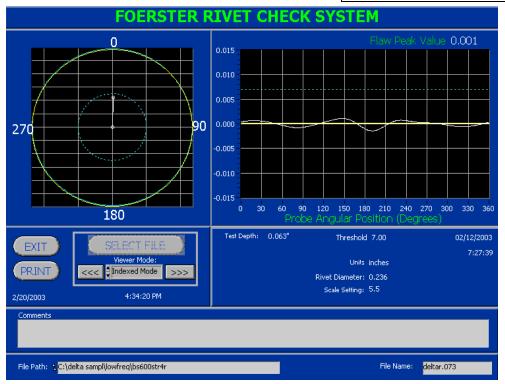


FIGURE E-182 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #7 (Panel FT2/F4).

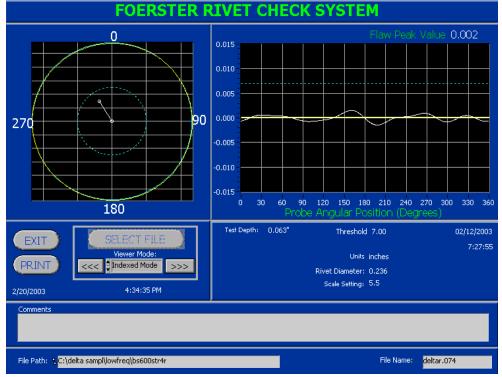


FIGURE E-183 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #8 (Panel FT2/F4).

SHEET	E-115	NO.	4-086624-20
TOTAL	E-153		
ISSUE DATE			03/26/2003

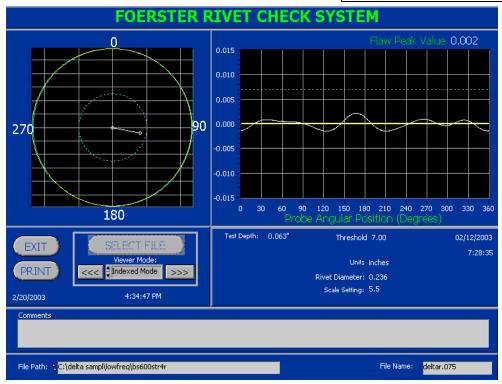


FIGURE E-184 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #9 (Panel FT2/F4).

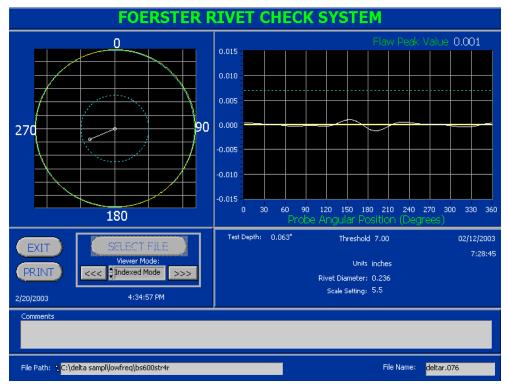


FIGURE E-185 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #10 (Panel FT2/F4).

SHEET	E-116	NO.	4-086624-20
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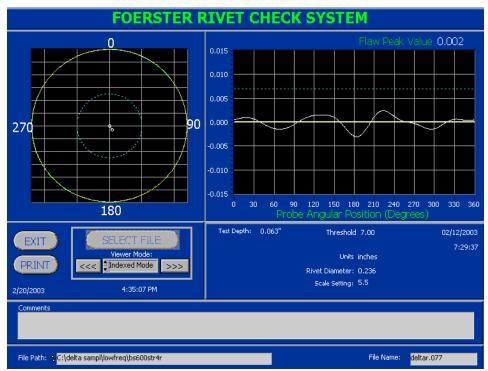


FIGURE E-186 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #11 (Panel FT2/F4).

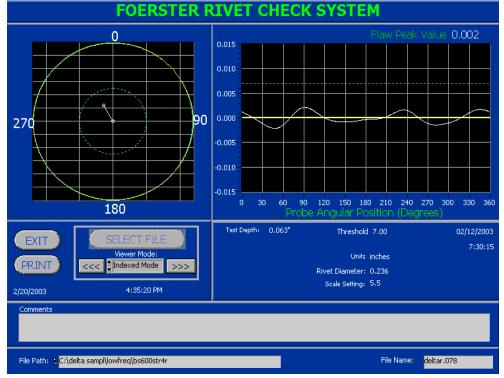


FIGURE E-187 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #12 (Panel FT2/F4).

SHEET	E-117	NO.	4-086624-20
TOTAL	E-153		
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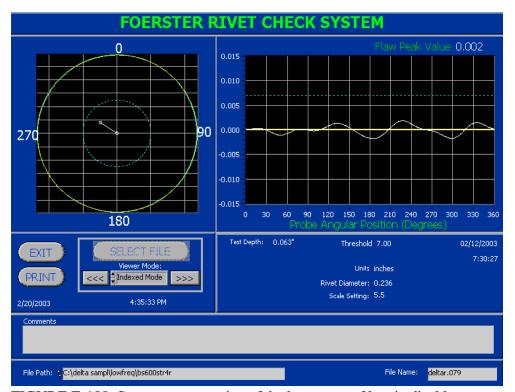


FIGURE E-188 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #13 (Panel FT2/F4).

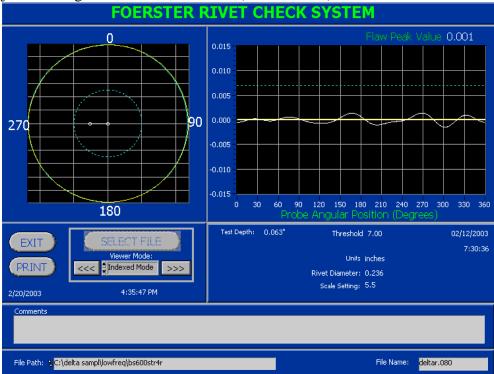


FIGURE E-189 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #14 (Panel FT2/F4).

SHEET	E-118	NO.	4-086624-20
TOTAL	E-153		
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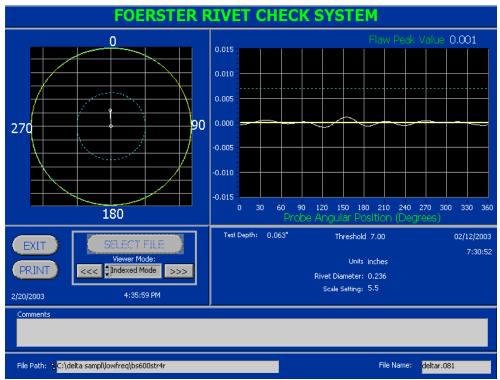


FIGURE E-190 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 680, rivet #15 (Panel FT2/F4).

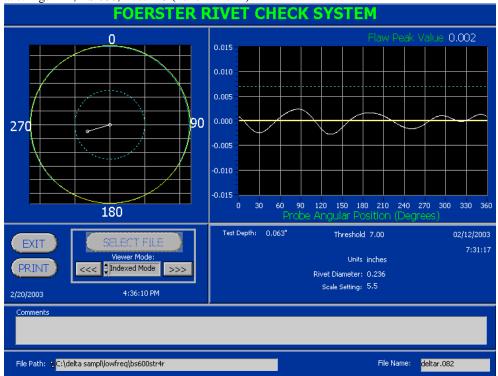


FIGURE E-191 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #1 (Panel FT2/F4).

SHEET	E-119	NO.	4-086624-20
TOTAL	E-153		
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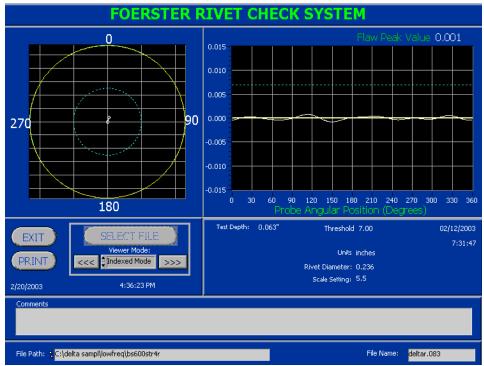


FIGURE E-192 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #2 (Panel FT2/F4).

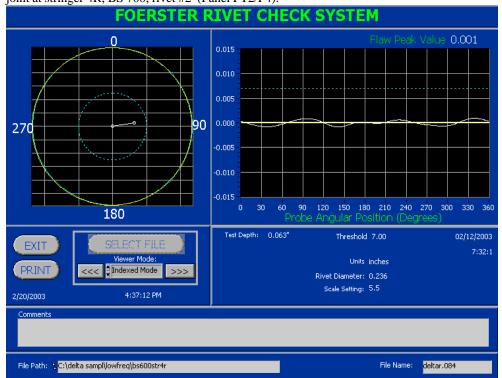


FIGURE E-193 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #3 (Panel FT2/F4).

SHEET	E-120	NO.	4-086624-20
TOTAL	E-153		
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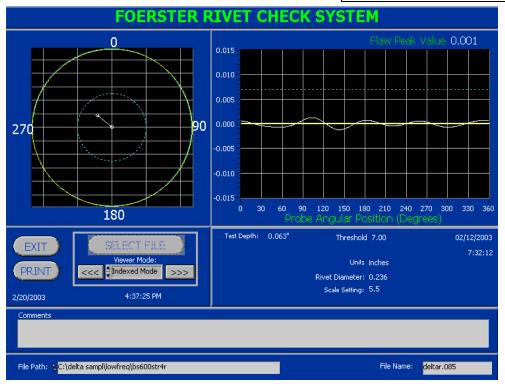


FIGURE E-194 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #4 (Panel FT2/F4).

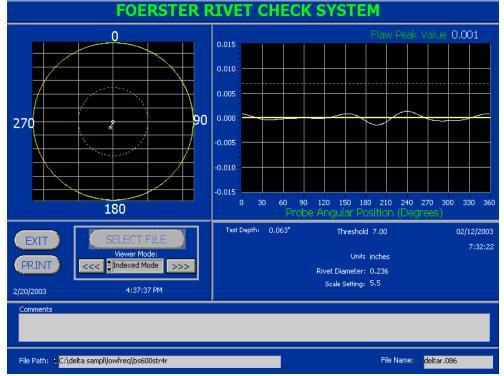


FIGURE E-195 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #5 (Panel FT2/F4).

SHEET	E-121	NO.	4-086624-20
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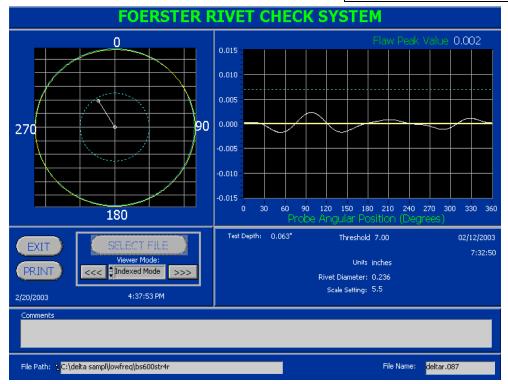


FIGURE E-196 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #6 (Panel FT2/F4).

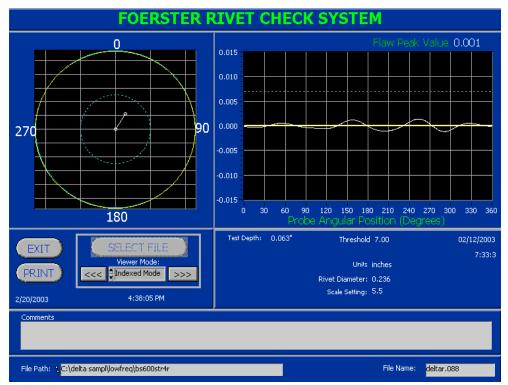


FIGURE E-8197 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #7 (Panel FT2/F4).

SHEET	E-122	NO.	4-086624-20
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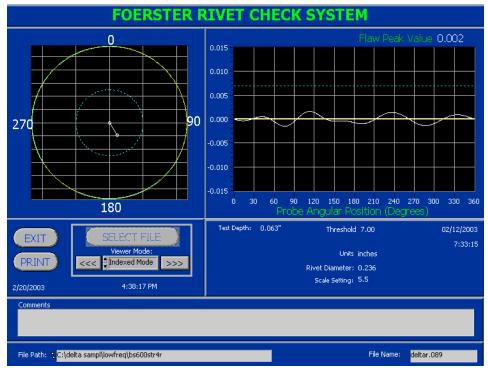


FIGURE E-198 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #8 (Panel FT2/F4).

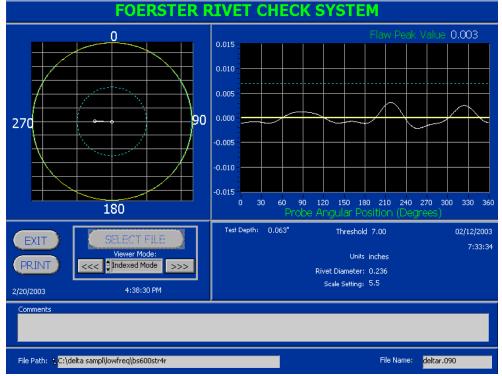


FIGURE E-199 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #9 (Panel FT2/F4).

SHEET	E-123	NO.	4-086624-20
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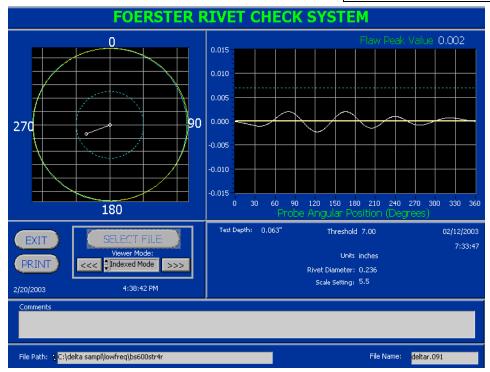


FIGURE E-200 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #10 (Panel FT2/F4).

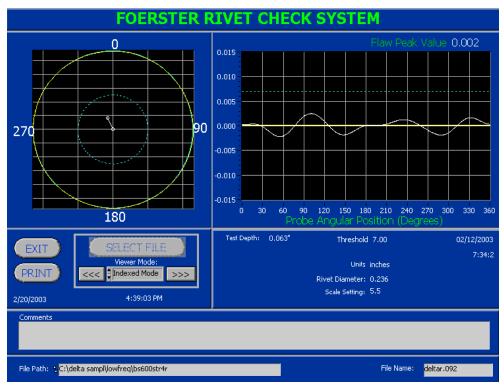


FIGURE E-201 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #11 (Panel FT2/F4).

SHEET	E-124	NO.	4-086624-20
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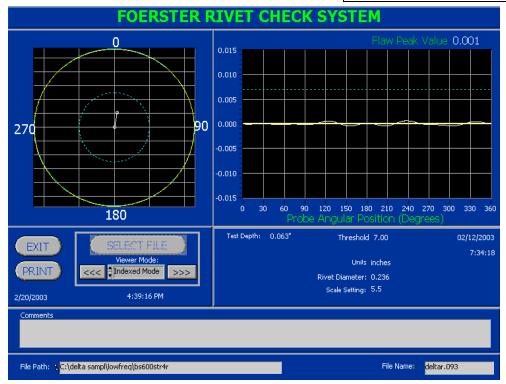
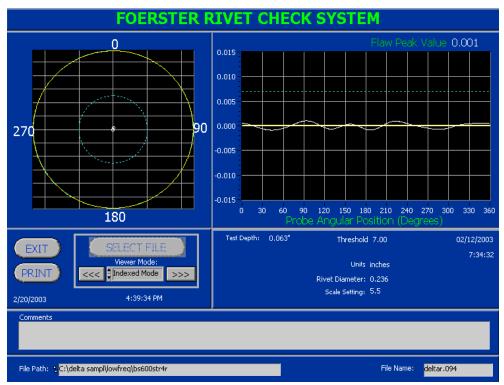


FIGURE E-202 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #12 (Panel FT2/F4).



E-203 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #13 (Panel FT2/F4).

SHEET	E-125	NO.	4-086624-20
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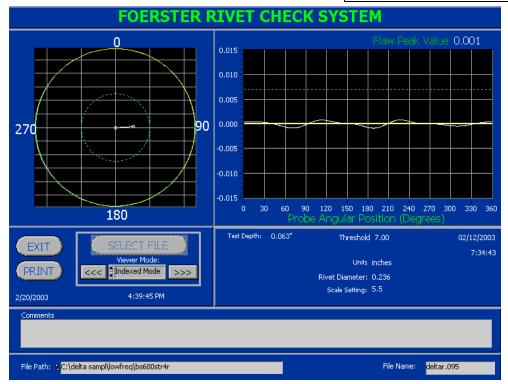


FIGURE E-204 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #14 (Panel FT2/F4).

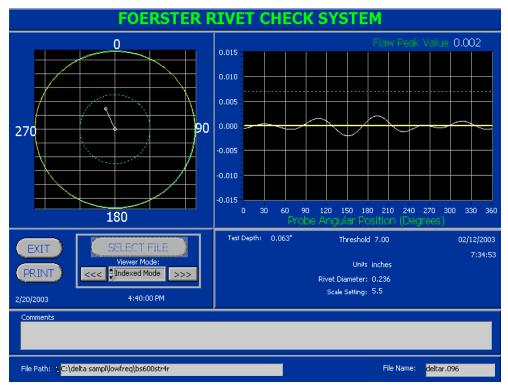


FIGURE E-205 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 700, rivet #15 (Panel FT2/F4).

SHEET	E-126	NO.	4-086624-20
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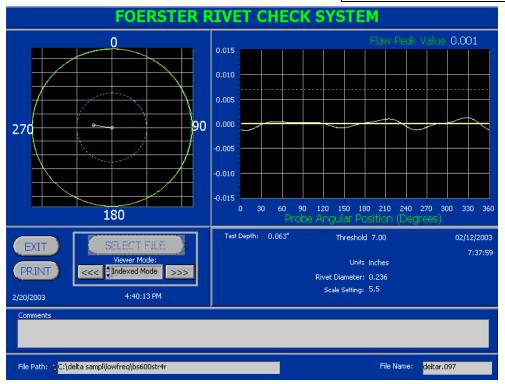


FIGURE E-206 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #1 (Panel FT2/F4).

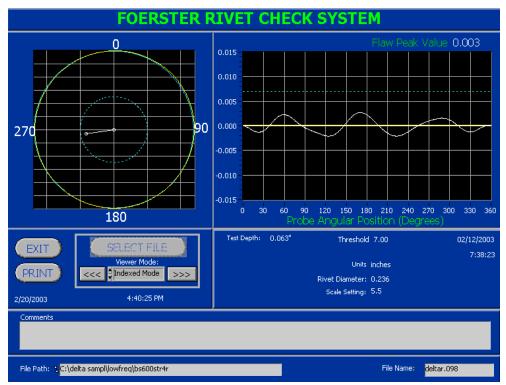


FIGURE E-207 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #2 (Panel FT2/F4).

SHEET	E-127	NO.	4-086624-20
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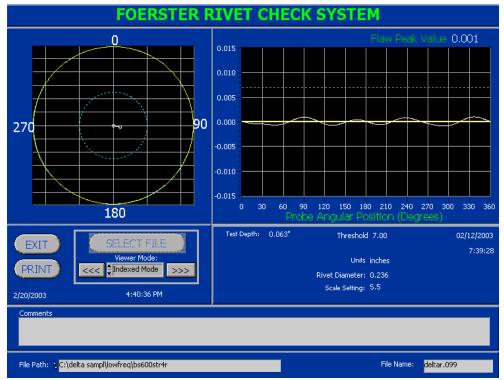


FIGURE E-208 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #3 (Panel FT2/F4).

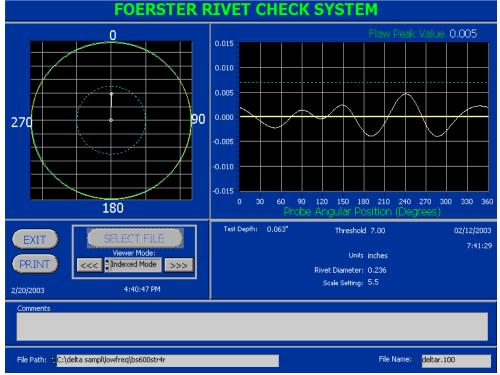


FIGURE E-209 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #4 (Panel FT2/F4).

SHEET	E-128	NO.	4-086624-20
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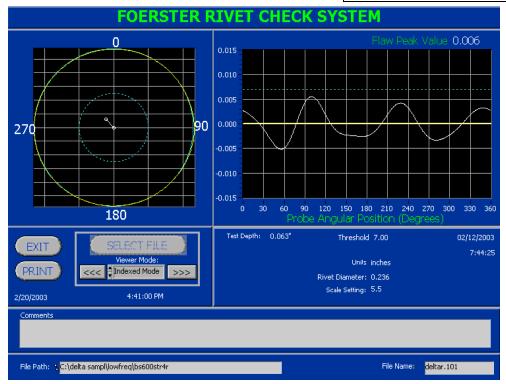


FIGURE E-210 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #5 (Panel FT2/F4).

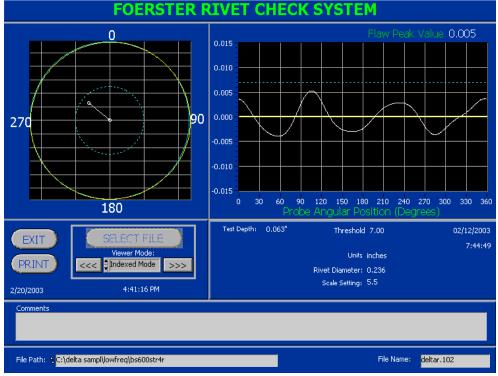


FIGURE E-211 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #6 (Panel FT2/F4).

SHEET	E-129	NO.	4-086624-20
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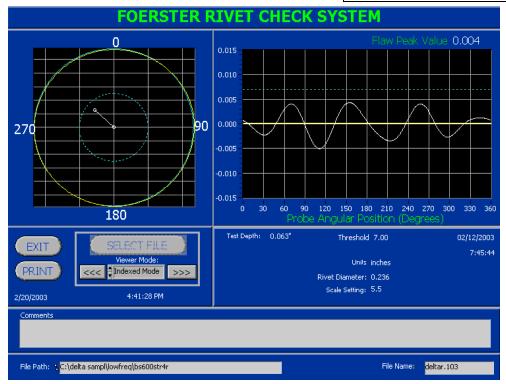


FIGURE E-212 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #7 (Panel FT2/F4).

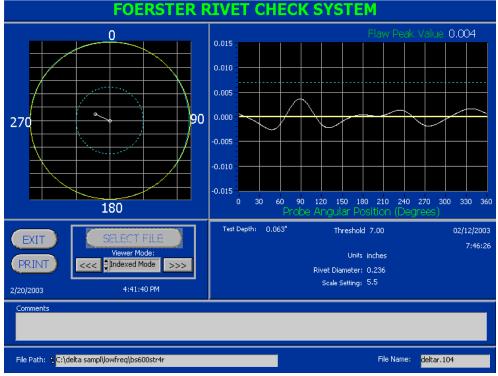


FIGURE E-213 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #8 (Panel FT2/F4).

SHEET	E-130	NO.	4-086624-20
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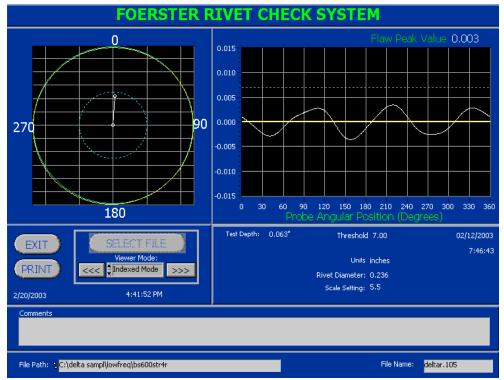


FIGURE E-214 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #9 (Panel FT2/F4).

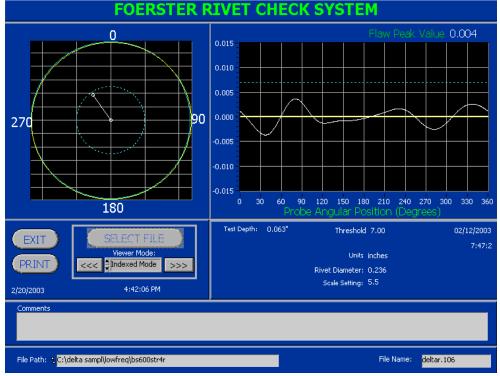


FIGURE E-215 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #10 (Panel FT2/F4).

SHEET	E-131	NO.	4-086624-20
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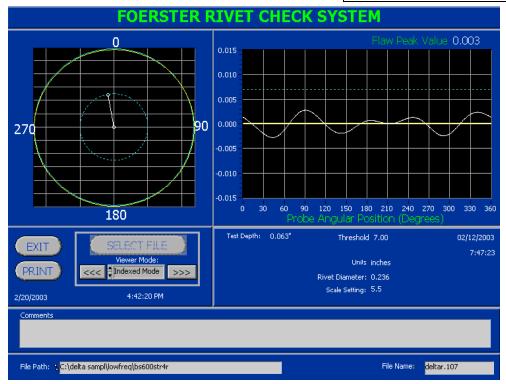


FIGURE E-216 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #11 (Panel FT2/F4).

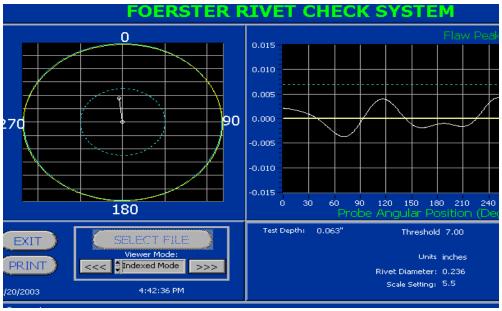


FIGURE E-217 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #12 (Panel FT2/F4).

SHEET	E-132	NO.	4-086624-20
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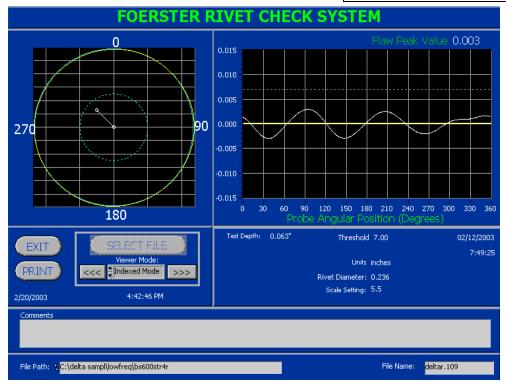


FIGURE E-218 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #13 (Panel FT2/F4).

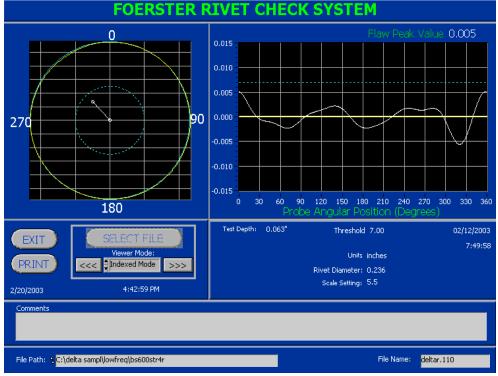


FIGURE E-219 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #14 (Panel FT2/F4).

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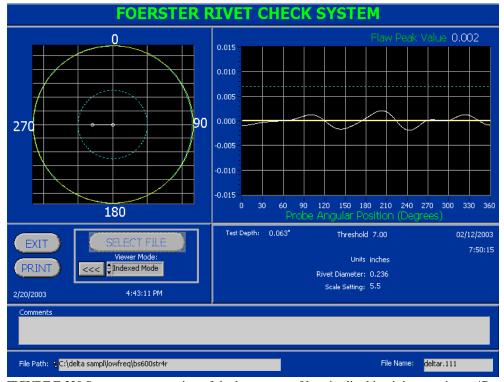


FIGURE E-220 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720, rivet #15 (Panel FT2/F4).

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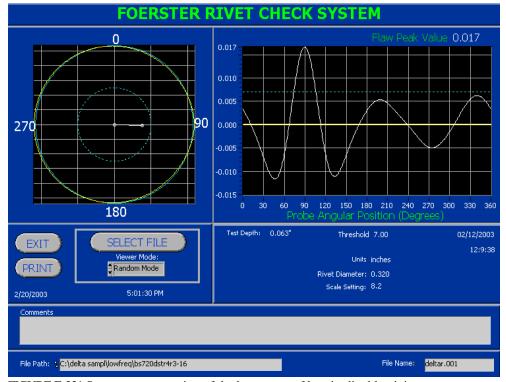


FIGURE E-221 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #1 (Panel FT3/F5).

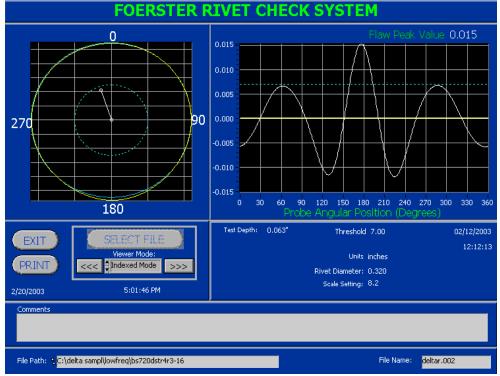


FIGURE E-222 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #2 (Panel FT3/F5).

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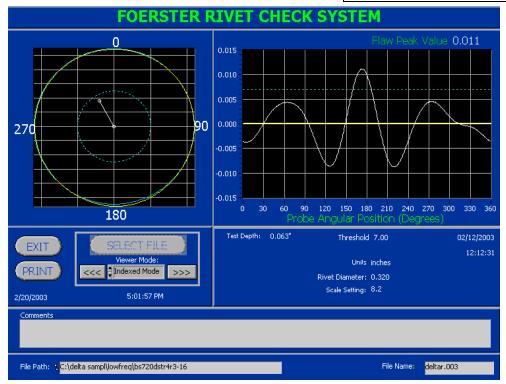


FIGURE E-223 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #3(Panel FT3/F5).

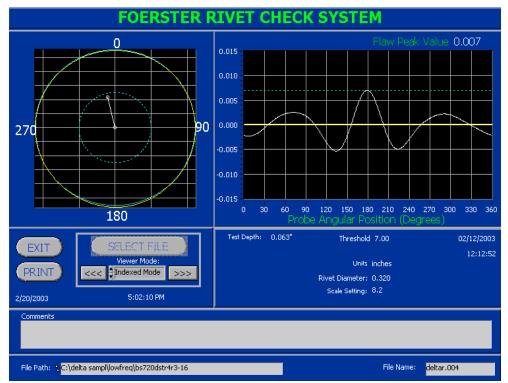


FIGURE E-224 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #4 (Panel FT3/F5).

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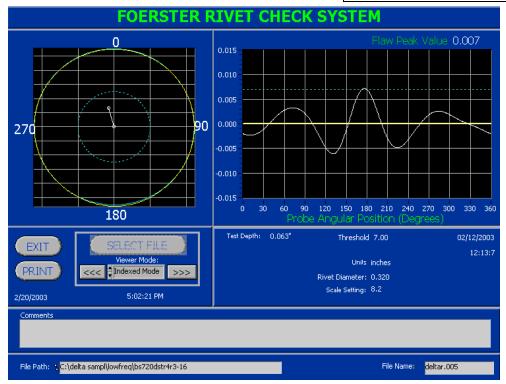


FIGURE E-225 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #5 (Panel FT3/F5).

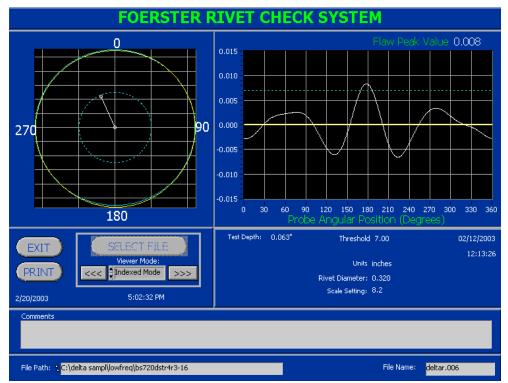


FIGURE E-226 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #6 (Panel FT3/F5).

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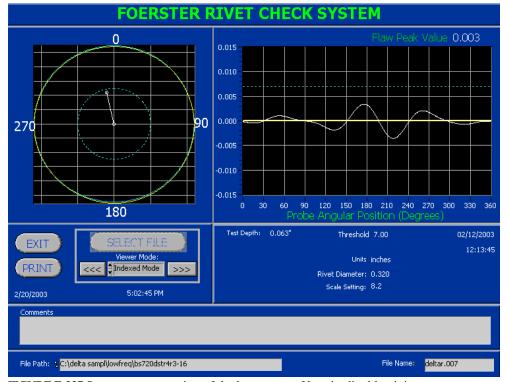


FIGURE E-227 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #7

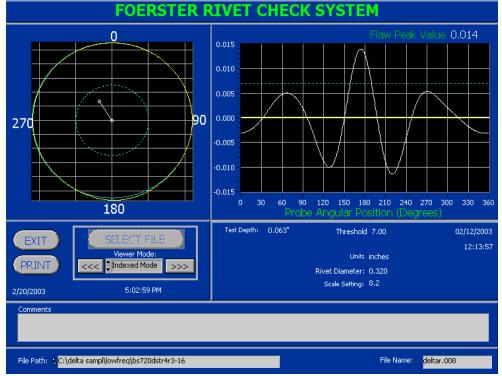


FIGURE E-228 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #8 (Panel FT3/F5).

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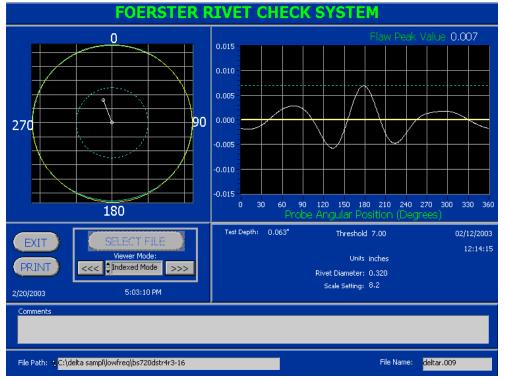


FIGURE E-229 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #9 (Panel FT3/F5).

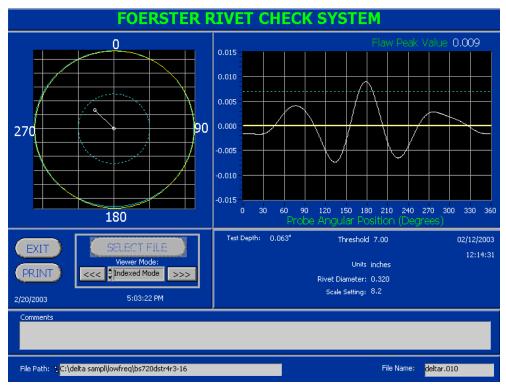


FIGURE E-230 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #10 (Panel FT3/F5).

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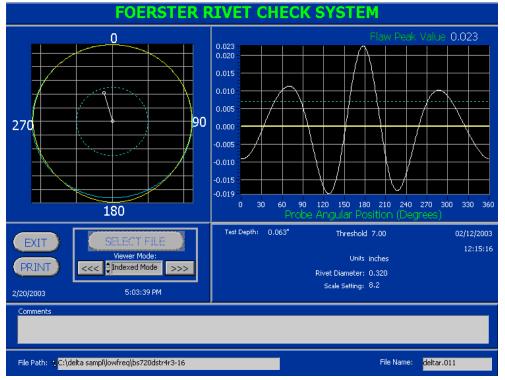


FIGURE E-231 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #11 (Panel FT3/F5).

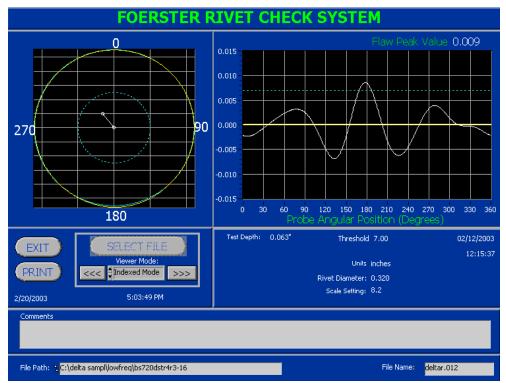


FIGURE E-232 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #12 (Panel FT3/F5).

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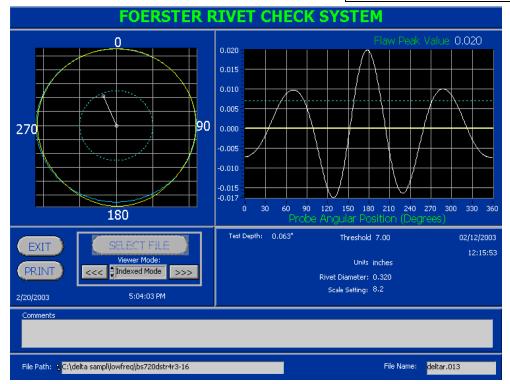


FIGURE E-233 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #13 (Panel FT3/F5).

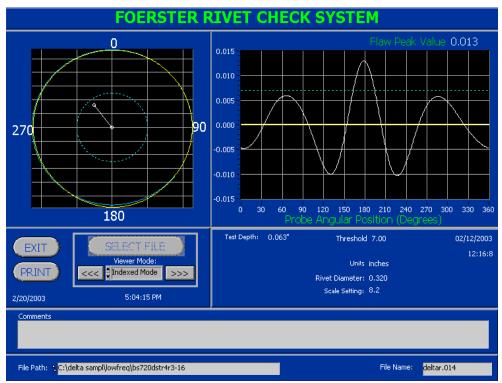


FIGURE E-234 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #14 (Panel FT3/F5).

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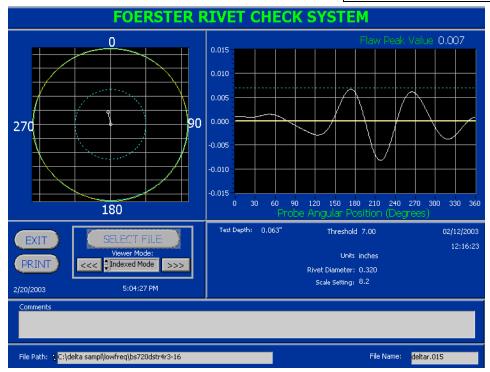


FIGURE E-235 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720A, rivet #15 (Panel FT3/F5).

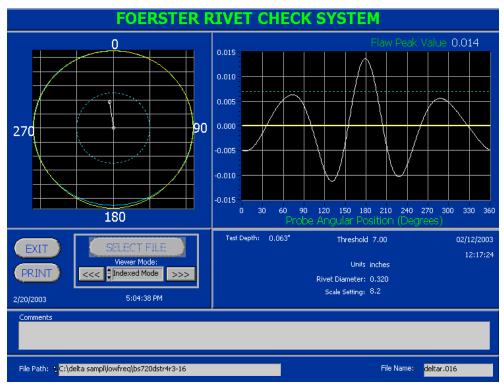


FIGURE E-236 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #1 (Panel FT3/F5).

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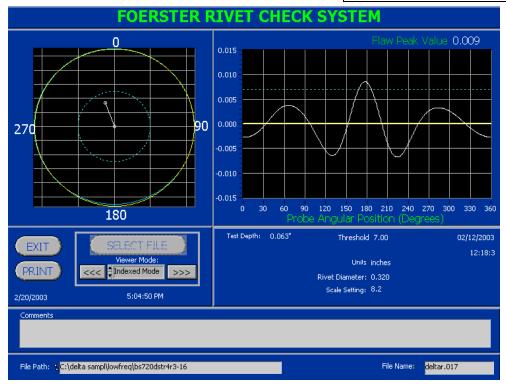


FIGURE E-237 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #2 (Panel FT3/F5).

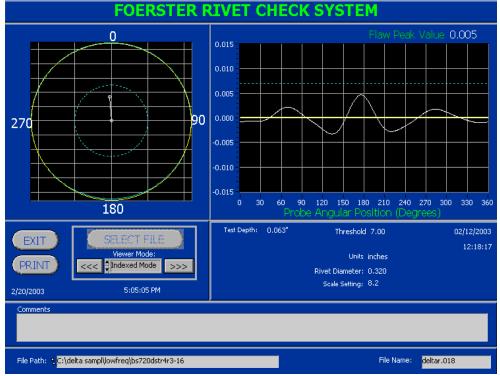


FIGURE E-238 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #3 (Panel FT3/F5).

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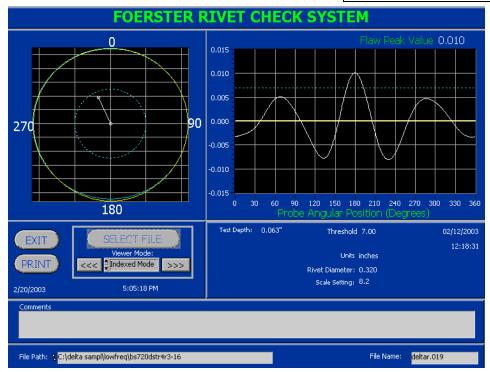


FIGURE E-239 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #4 (Panel FT3/F5).

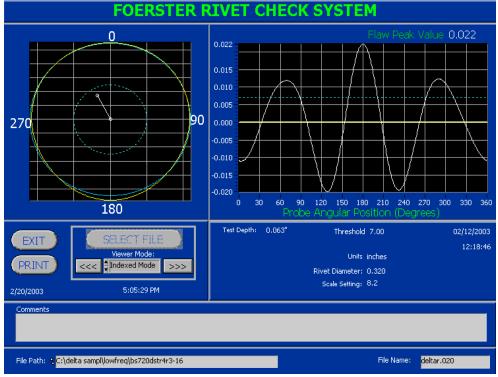


FIGURE E-240 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #5 (Panel FT3/F5).

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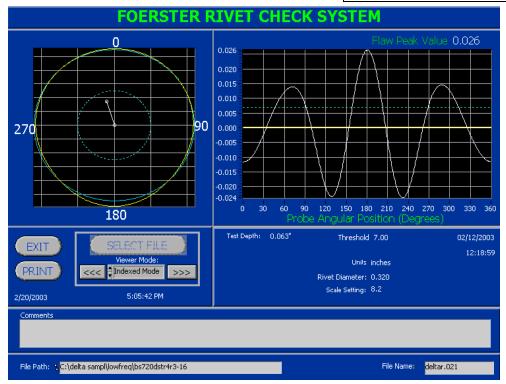


FIGURE E-241 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #6 (Panel FT3/F5).

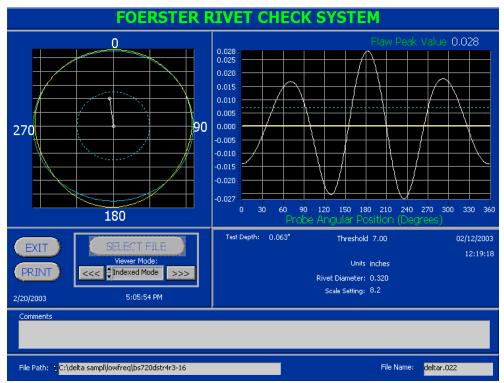


FIGURE E-242 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #7 (Panel FT3/F5).

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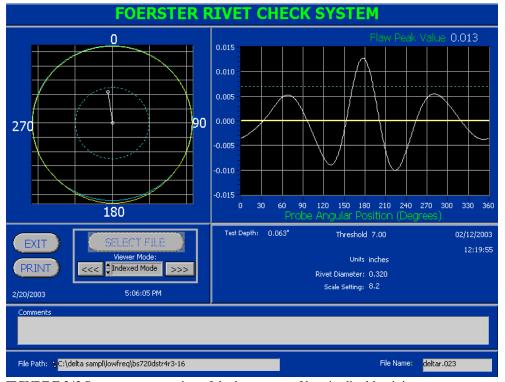


FIGURE E-243 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #8 (Panel FT3/F5).

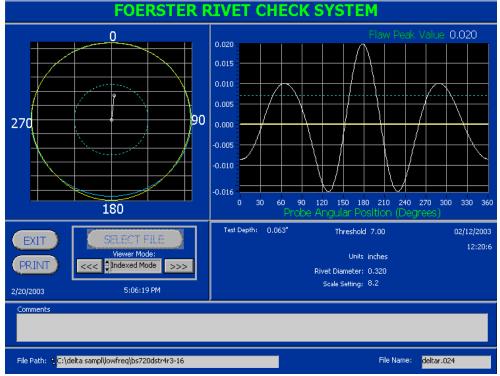


FIGURE E-244 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #9 (Panel FT3/F5).

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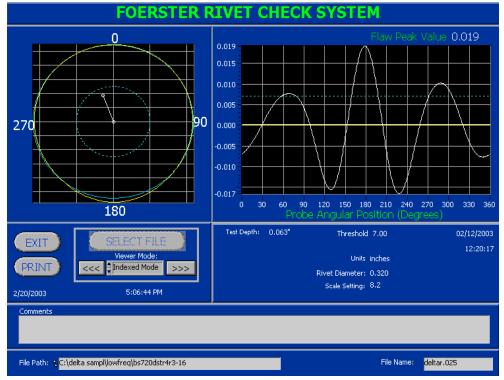


FIGURE E-245 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #10 (Panel FT3/F5).

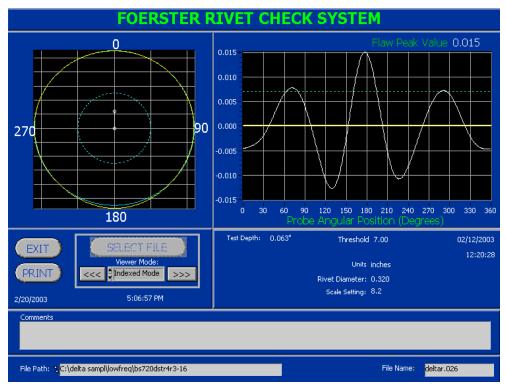


FIGURE E-246 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #11 (Panel FT3/F5).

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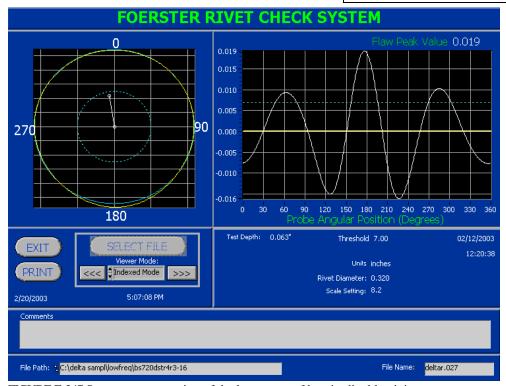


FIGURE E-247 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #12 (Panel FT3/F5).

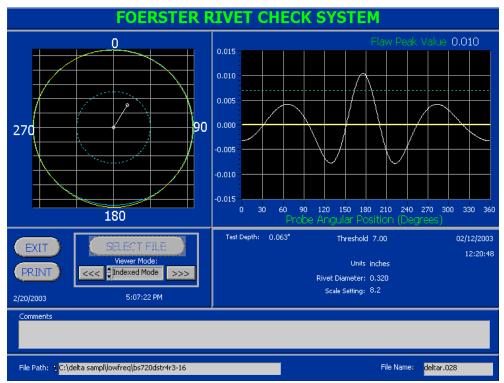


FIGURE E-248 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #13 (Panel FT3/F5).

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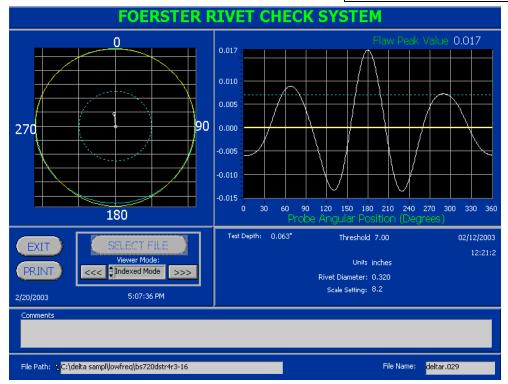


FIGURE E-249 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #14 (Panel FT3/F5).

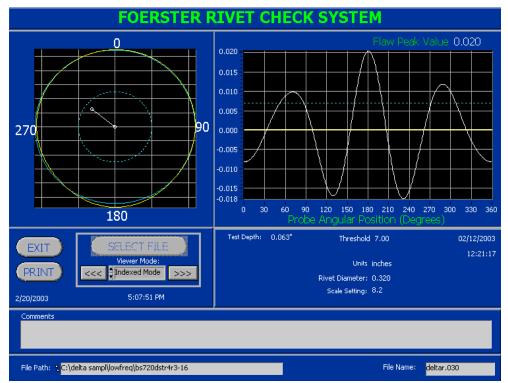


FIGURE E-250 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720B, rivet #15 (Panel FT3/F5).

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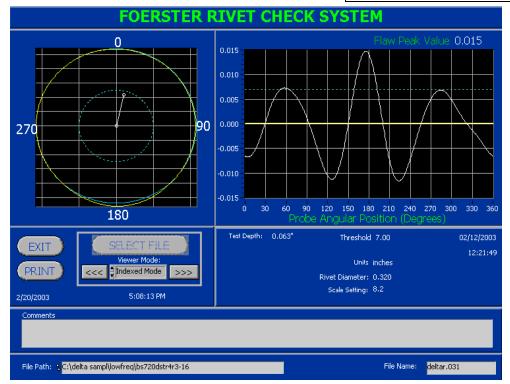


FIGURE E-251 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720C, rivet #1 (Panel FT3/F5).

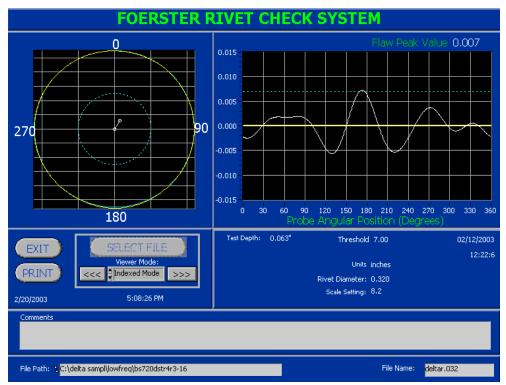


FIGURE E-252 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720C, rivet #2 (Panel FT3/F5).

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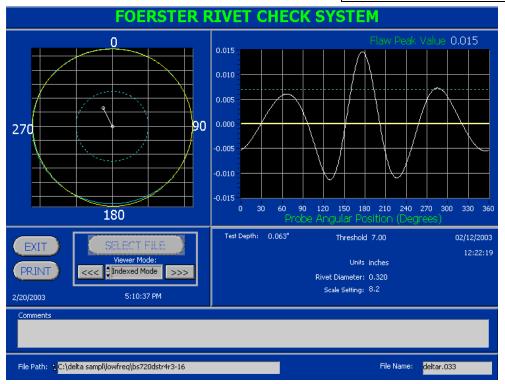


FIGURE E-253 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720C, rivet #3 (Panel FT3/F5).

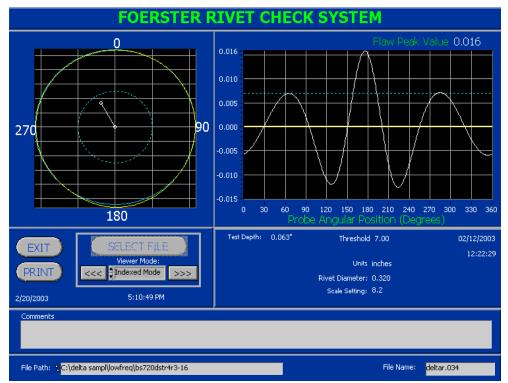


FIGURE E-254 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720C, rivet #4 (Panel FT3/F5).

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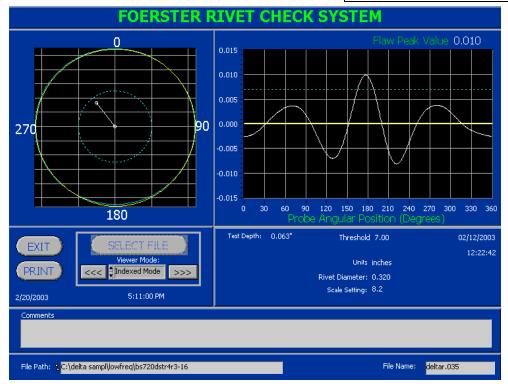


FIGURE E-255 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720C, rivet #5 (Panel FT3/F5).

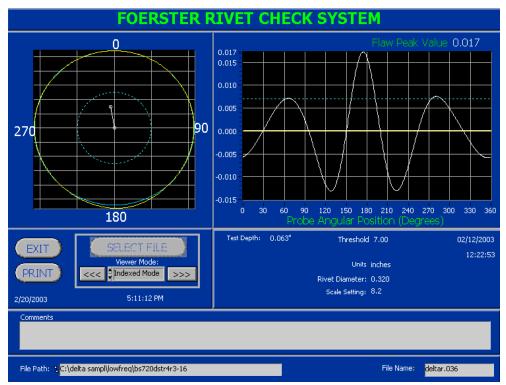


FIGURE E-256 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720C, rivet #6 (Panel FT3/F5).

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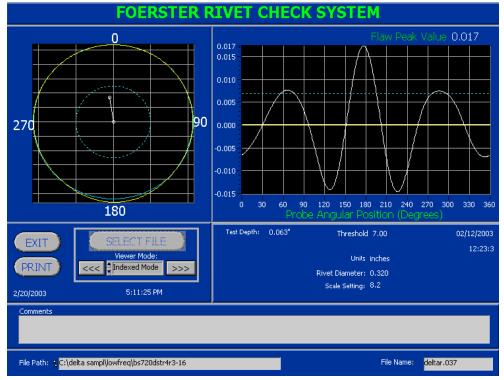


FIGURE E-257 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720C, rivet #7 (Panel FT3/F5).

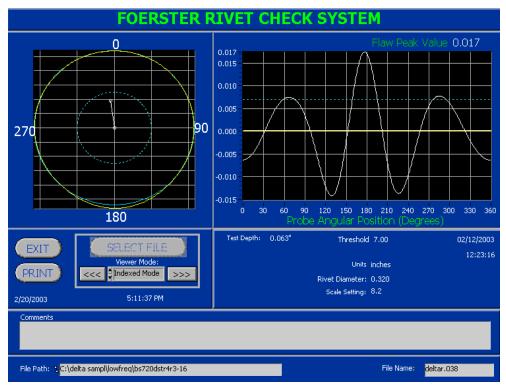


FIGURE E-258 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720C rivet #8 (Panel FT3/F5).

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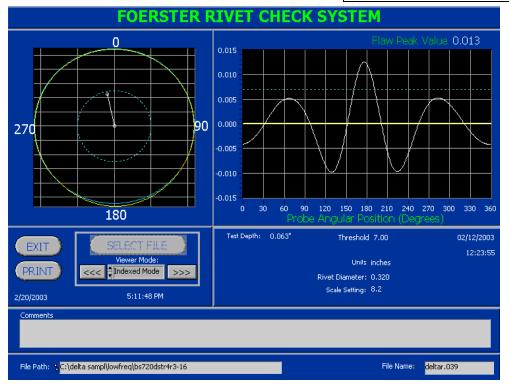


FIGURE E-259 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720C, rivet #9 (Panel FT3/F5).

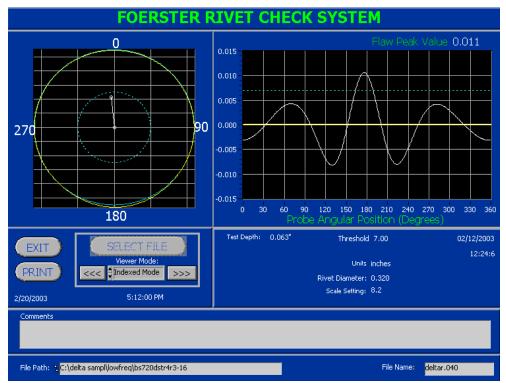


FIGURE E-260 Screen representation of the lower row of longitudinal lap joint at stringer 4R, BS 720C, rivet #10 (Panel FT3/F5).

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## APPENDIX F

## PHOTOGRAPHS AND SCREEN REPRESENTATIONS OF INDICATIONS DETECTED BY MAGNETO OPTICAL IMAGING (MOI)

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FIGURE F-24	Location of MOI indication found at BS 950F, rivet #6 (aft side) on the lower row of the longitudinal lap joint at stringer 4LF-15
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Figure F-1. Screen representation of MOI indication at rivet #11 between BS 520 and BS 540 on the lower row of the longitudinal lap joint at stringer 4R.



Figure F-2. Screen representation of MOI indication at rivet #13 between BS 520 and BS 540 on the lower row of the longitudinal lap joint at stringer 4R.

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Figure F-3. Screen representation of MOI indication at rivet #15 between BS 520 and BS 540 on the lower row of the longitudinal lap joint at stringer 4R.

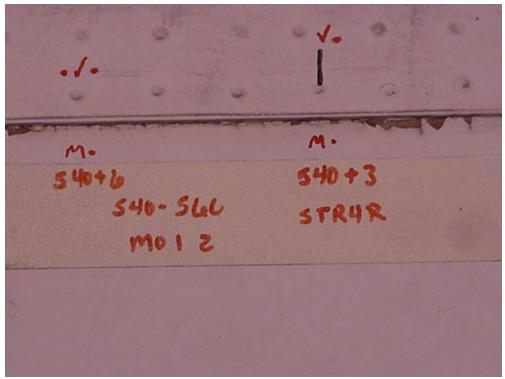


Figure F-4. MOI indications (2 indications at 2 fasteners) found between BS 540 and BS 560 on the lower row of the longitudinal lap joint at stringer 4R.

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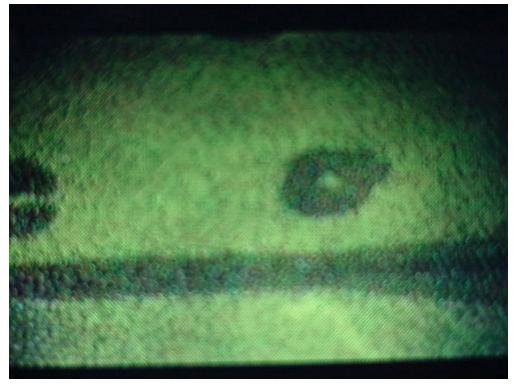


Figure F-5. Screen representation of MOI indication at rivet #3 between BS 540 and BS 560 on the lower row of the longitudinal lap joint at stringer 4R.



Figure F-6. Screen representation of MOI indication at rivet #6 between BS 540 and BS 560 on the lower row of the longitudinal lap joint at stringer 4R.

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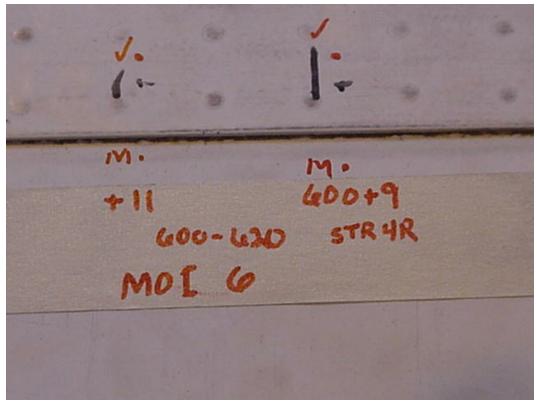


Figure F-7. MOI indications (2 indications at 2 fasteners) found between BS 600 and BS 620 on the lower row of the longitudinal lap joint at stringer 4R.



Figure F-8. Screen representation of MOI indication at rivet #9 between BS 600 and BS 620 on the lower row of the longitudinal lap joint at stringer 4R.

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Figure F-9. Screen representation of MOI indication at rivet #11 between BS 600 and BS 620 on the lower row of the longitudinal lap joint at stringer 4R.

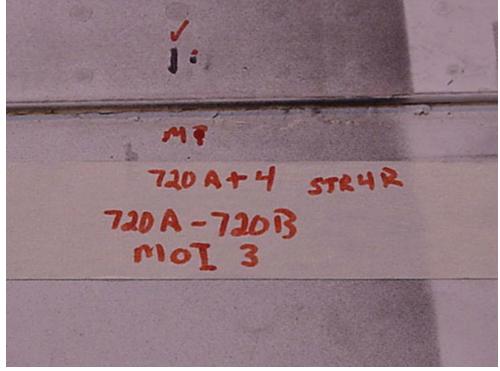


Figure F-10. MOI indications (1 indication at 1 fastener) found between BS 720A and BS 720B on the lower row of the longitudinal lap joint at stringer 4R.

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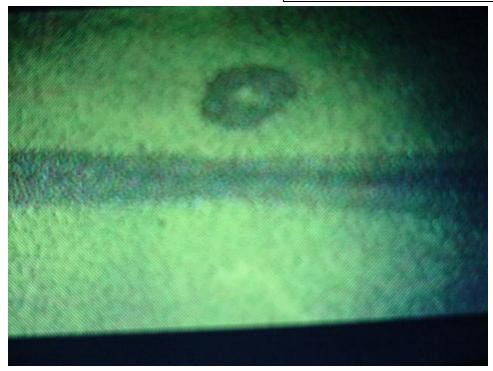


Figure F-11. Screen representation of MOI indication at rivet #4 between BS 720A and BS 720B on the lower row of the longitudinal lap joint at stringer 4R.

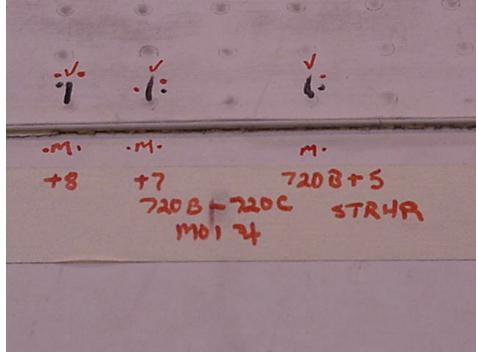


Figure F-12. MOI indications (5 indications at 3 fasteners) found between BS 720B and BS 720C on the lower row of the longitudinal lap joint at stringer 4R.

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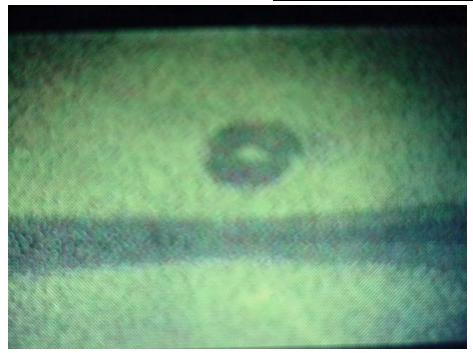


Figure F-13. Screen representation of MOI indication at rivet #5 between BS 720B and BS 720C on the lower row of the longitudinal lap joint at stringer 4R.



Figure F-14. Screen representation of MOI indication at rivet #7 between BS 720B and BS 720C on the lower row of the longitudinal lap joint at stringer 4R.

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Figure F-15. Screen representation of MOI indication at rivet #8 between BS 720B and BS 720C on the lower row of the longitudinal lap joint at stringer 4R.

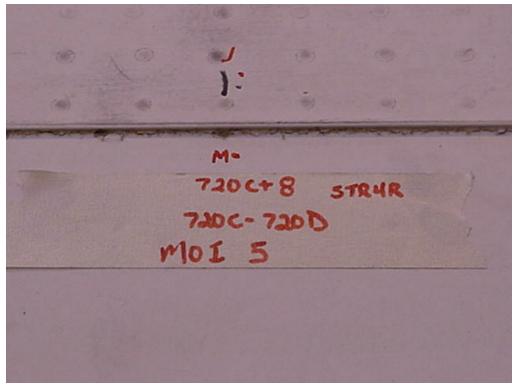


Figure F-16. MOI indications (1 indication at 1 fastener) found between BS 720C and BS 720D on the lower row of the longitudinal lap joint at stringer 4R.

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Figure F-17. Screen representation of MOI indication at rivet #8 between BS 720C and BS 720D on the lower row of the longitudinal lap joint at stringer 4R.



Figure F-18. Photograph of MOI inspection using wearable monitor.

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Figure F-19. Screen representation of MOI indication at rivet #4 between BS 380 and 400 on the lower row of the longitudinal lap joint at stringer 4L.



Figure F-20. Screen representation of MOI indication at rivet #5 between BS 380 and 400 on the lower row of the longitudinal lap joint at stringer 4L.

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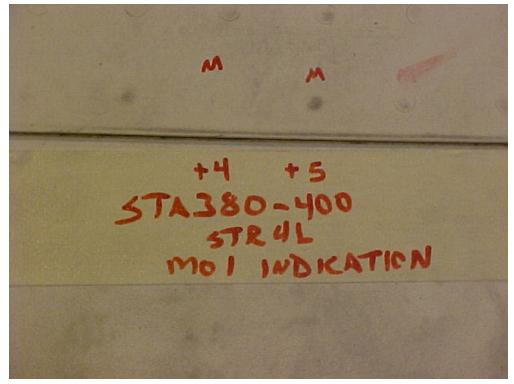


Figure F-21. MOI indications (2 indications at 2 fasteners) found between BS 380 and BS 400 on the lower row of the longitudinal lap joint at stringer 4L.



Figure F-22. Screen representation of MOI indication at rivet at BS 870 between stringer 2R and 3R on the circumferential butt joint.

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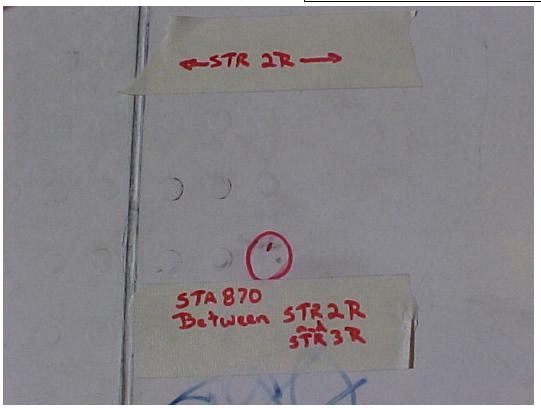


Figure F-23. MOI indication (1 indication at 1 fastener) found at BS 870 between stringer 2R and 3R on the circumferential butt joint.



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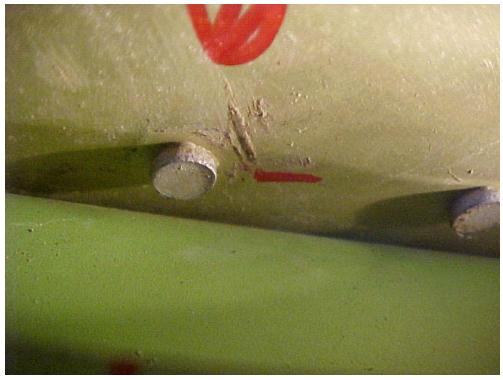


Figure F-25. Inside shot of location of MOI indication found at BS 950F, rivet #6 (aft side) on the lower row of the longitudinal lap joint at stringer 4L.

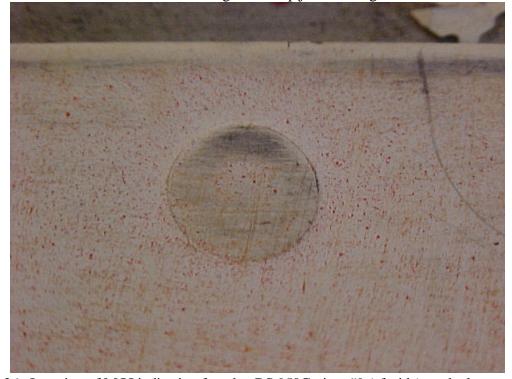


Figure F-26. Location of MOI indication found at BS 950C, rivet #9 (aft side) on the lower row of the longitudinal lap joint at stringer 4L.

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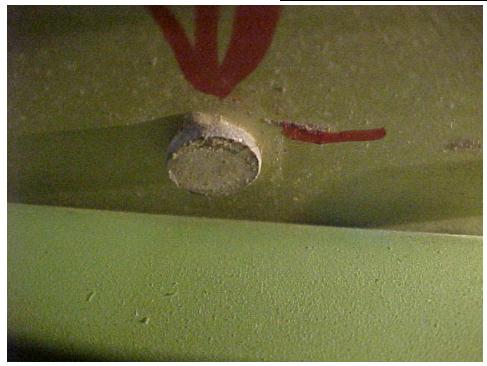


Figure F-27. Inside shot of location of MOI indication found at BS 950C, rivet #9 (aft side) on the lower row of the longitudinal lap joint at stringer 4L.

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### APPENDIX G

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Figure G-1. Photograph showing track and translator of the C-scan system.

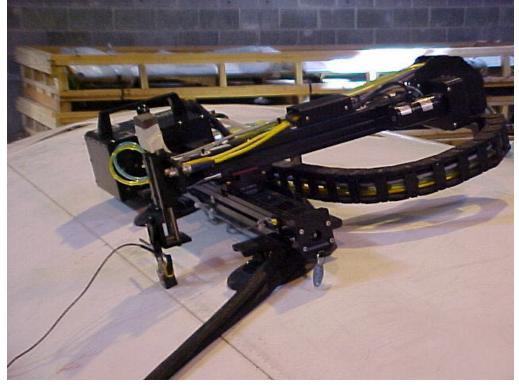


Figure G-2. Photograph showing track and translator of the C-scan system.

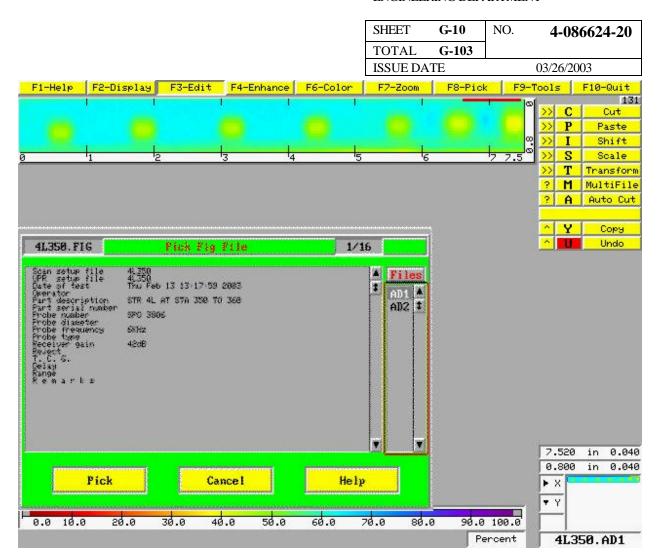


Figure G-3. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 350 and BS 360.

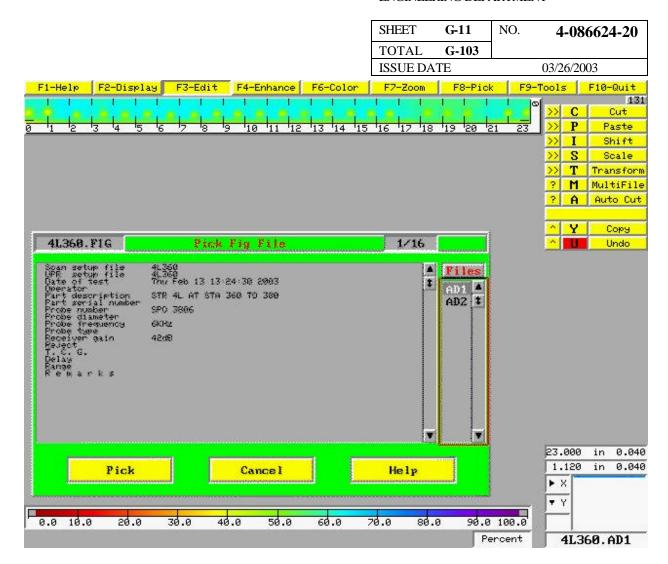


Figure G-4. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 360 and BS 380.

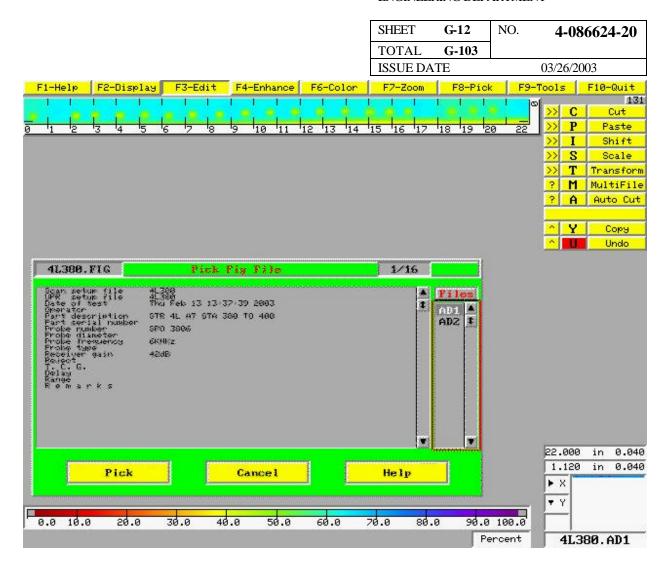


Figure G-5. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 380 and BS 400.

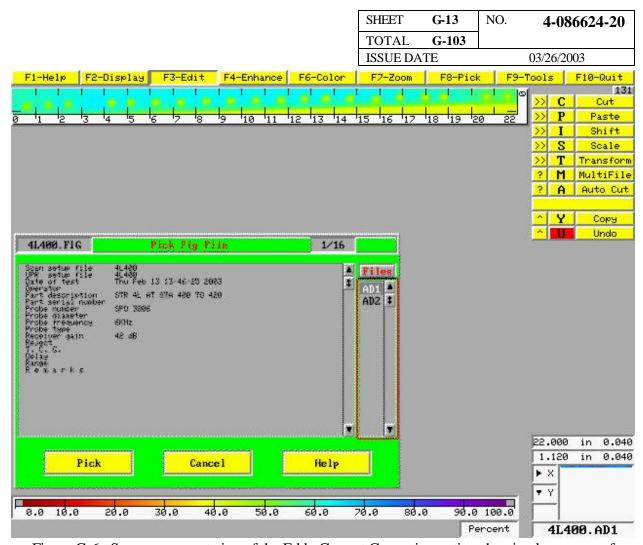


Figure G-6. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 400 and BS 420.

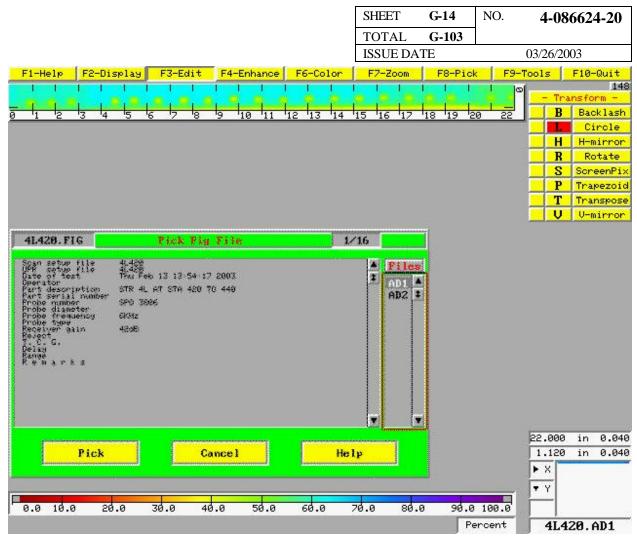


Figure G-7. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 420 and BS 440.

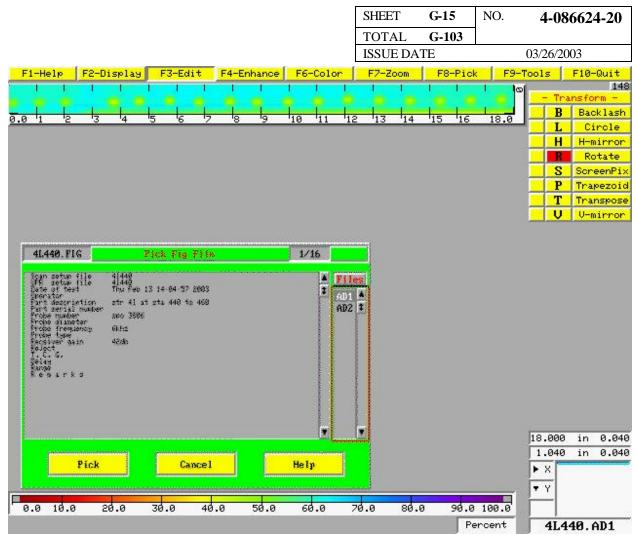


Figure G-8. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 440 and BS 460.

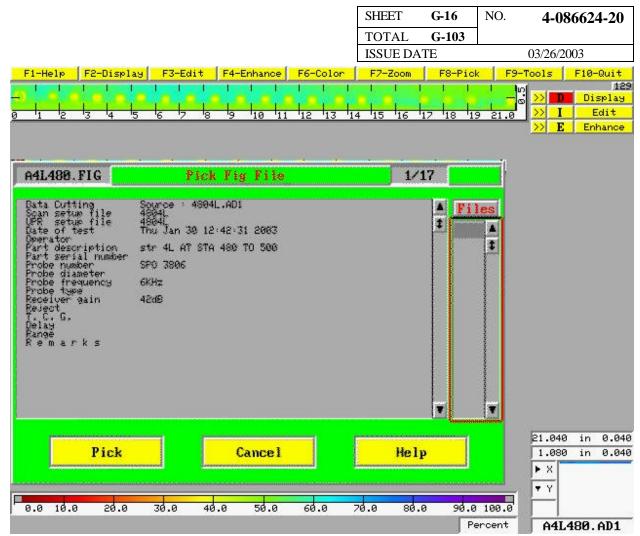


Figure G-9. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 480 and BS 500.

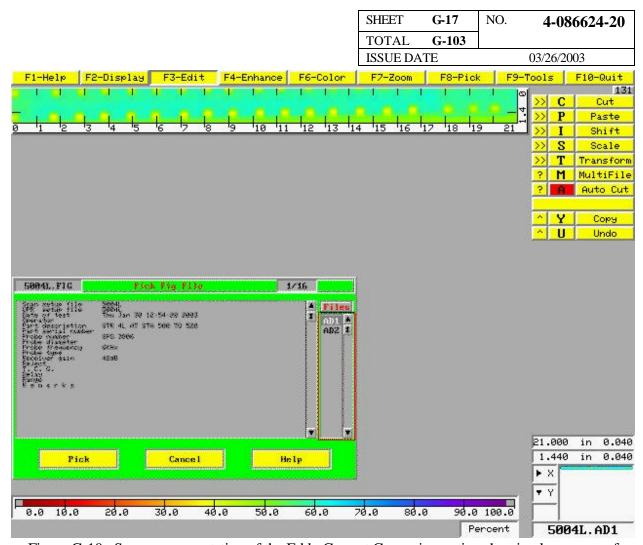


Figure G-10. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 500 and BS 520.

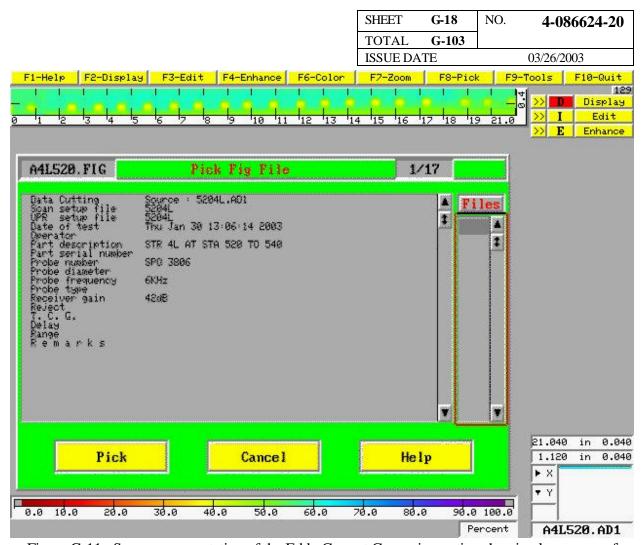


Figure G-11. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 520 and BS 540.

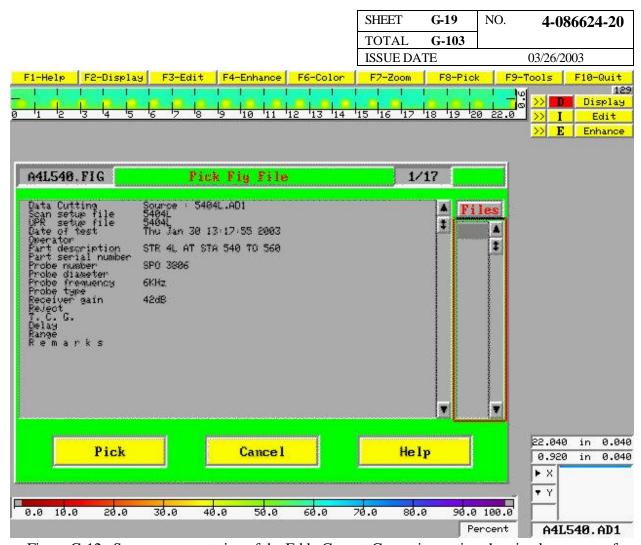


Figure G-12. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 540 and BS 560.

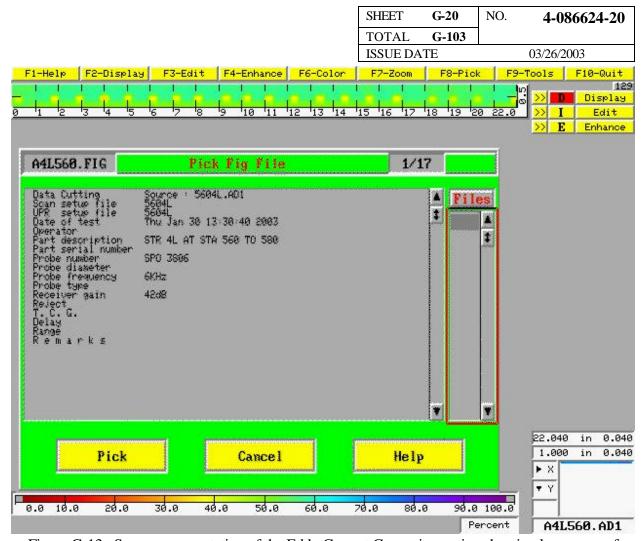


Figure G-13. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 560 and BS 580.

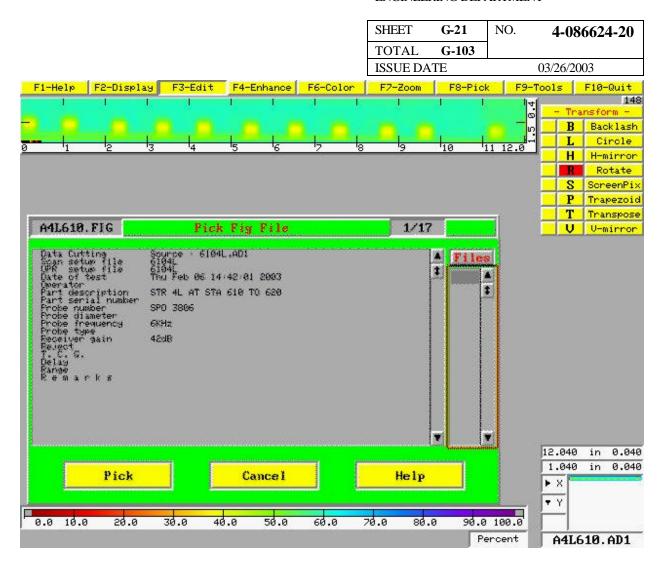


Figure G-14. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 610 and BS 620.

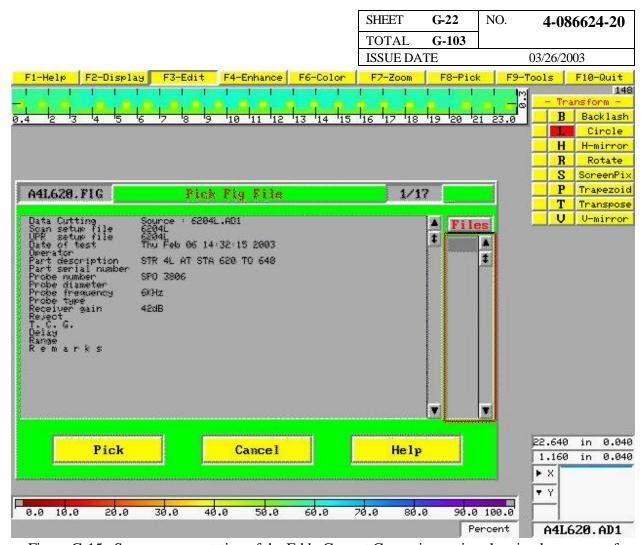


Figure G-15. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 620 and BS 640.

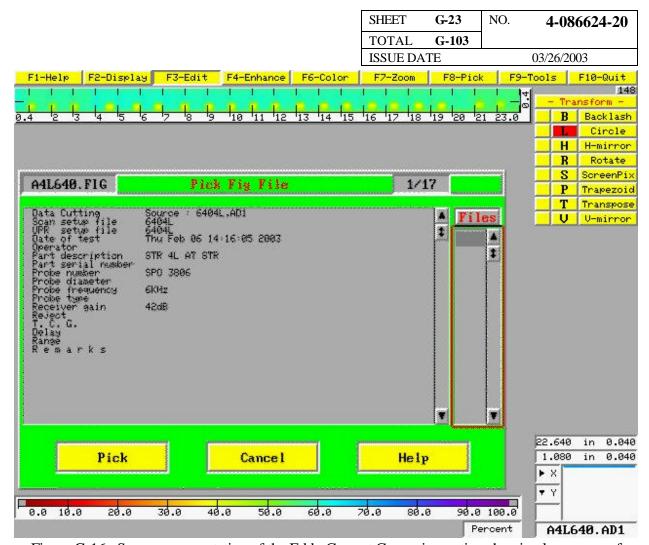


Figure G-16. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 640 and BS 660.

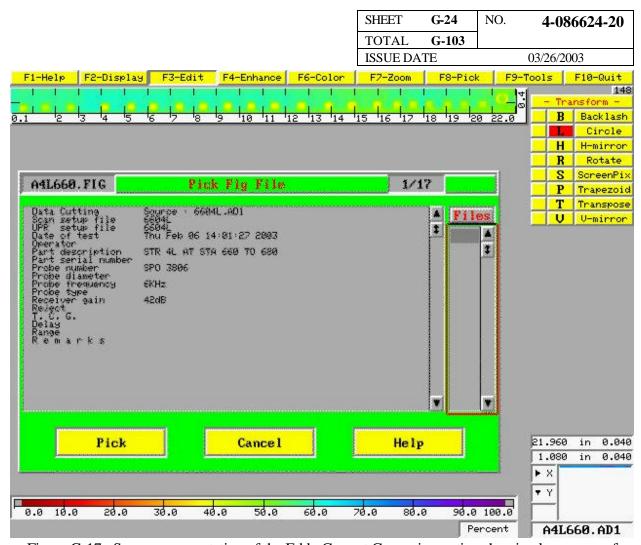


Figure G-17. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 660 and BS 680.

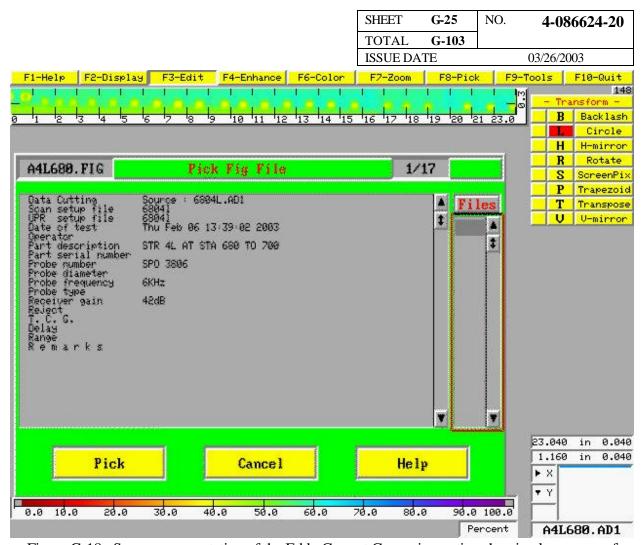


Figure G-18. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 680 and BS 700.

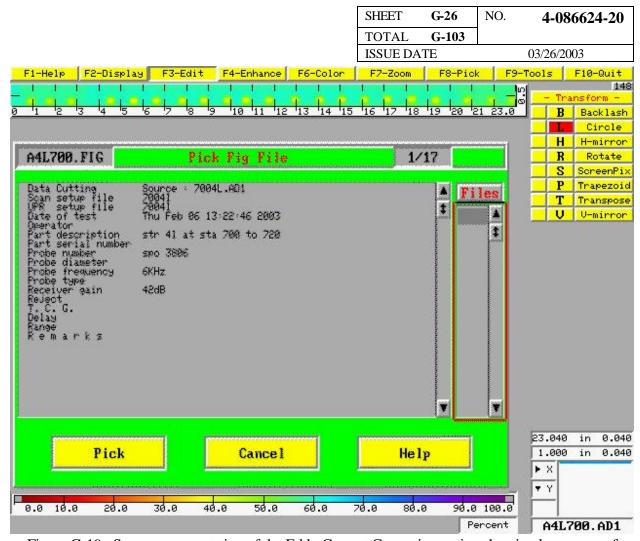


Figure G-19. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 700 and BS 720.

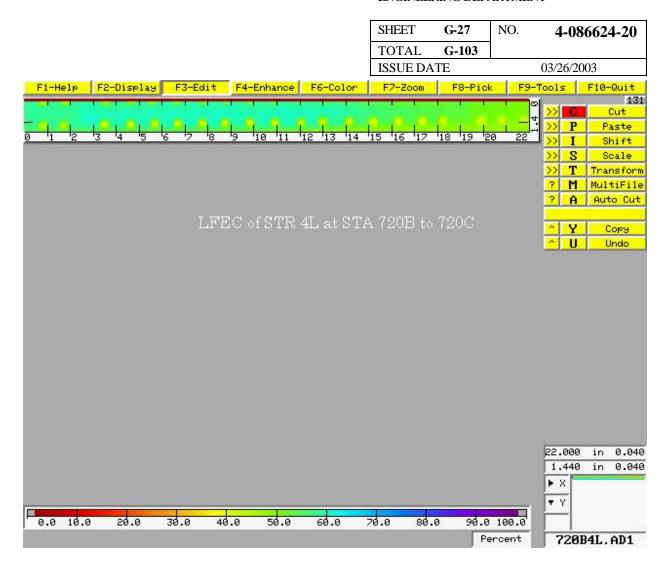


Figure G-20. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 720B and BS 720C.

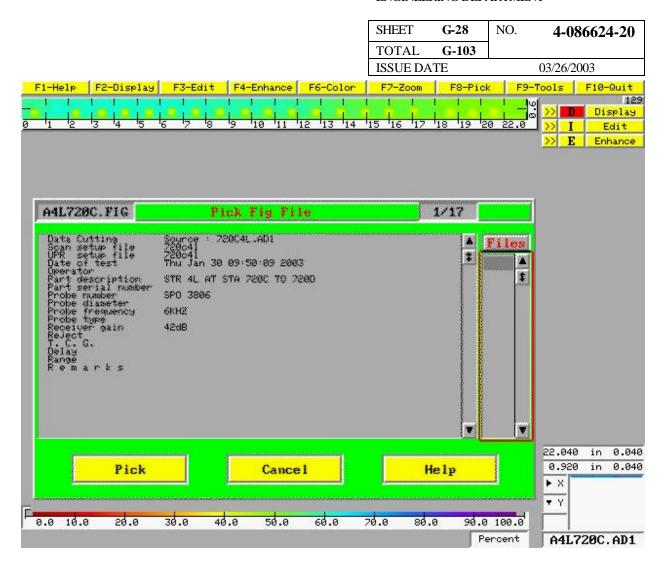


Figure G-21. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 720C and BS 720D.

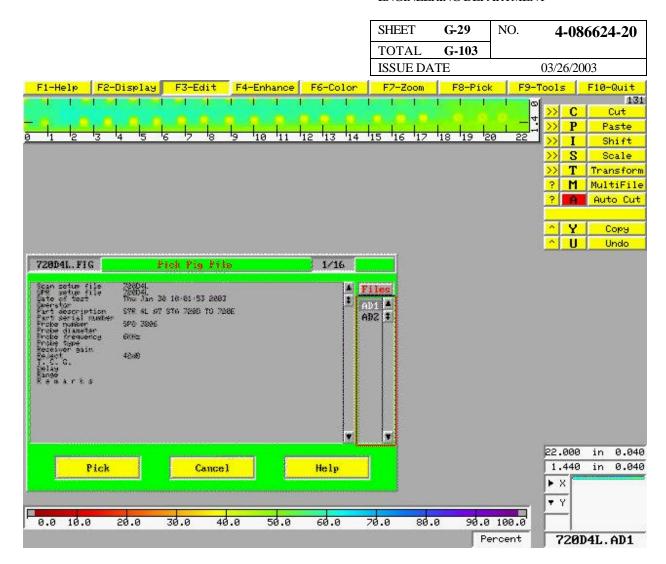


Figure G-22. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 720D and BS 720E.

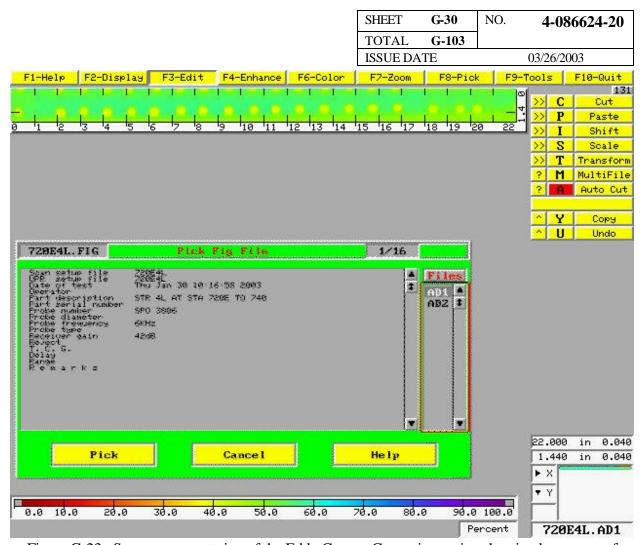


Figure G-23. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 720E and BS 740.

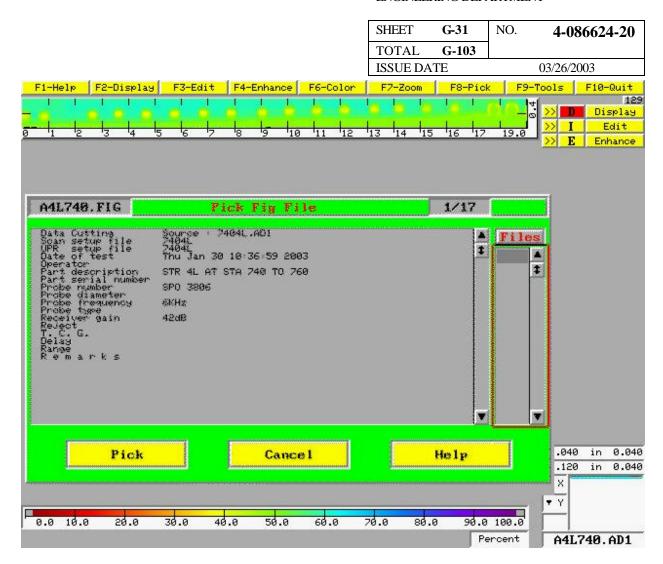


Figure G-24. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 740 and BS 760.

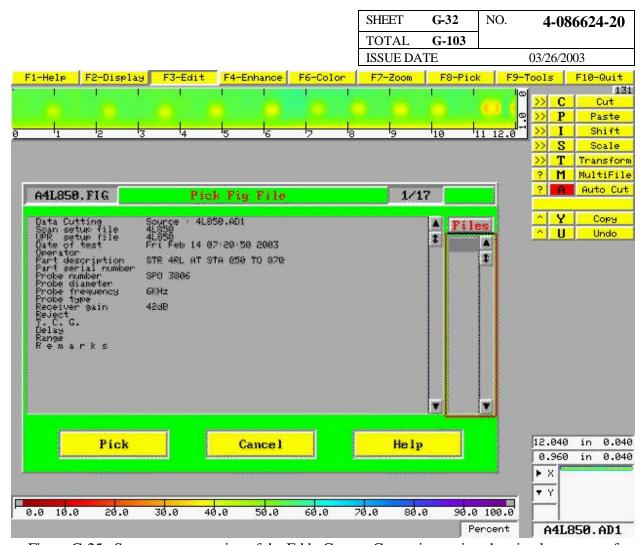


Figure G-25. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 850 and BS 870.

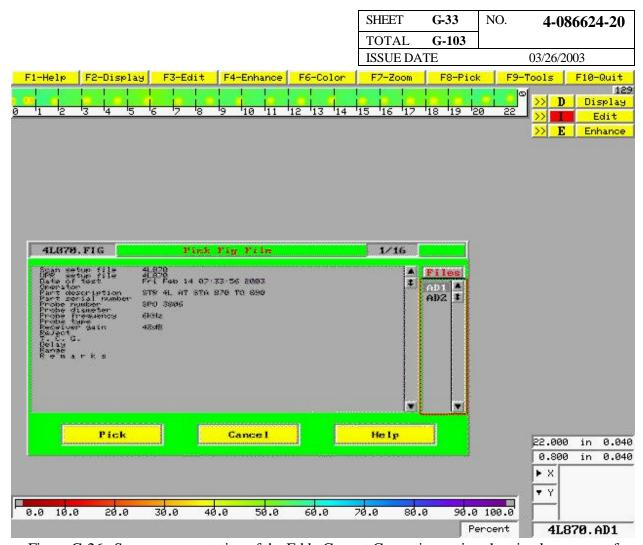


Figure G-26. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 870 and BS 890.

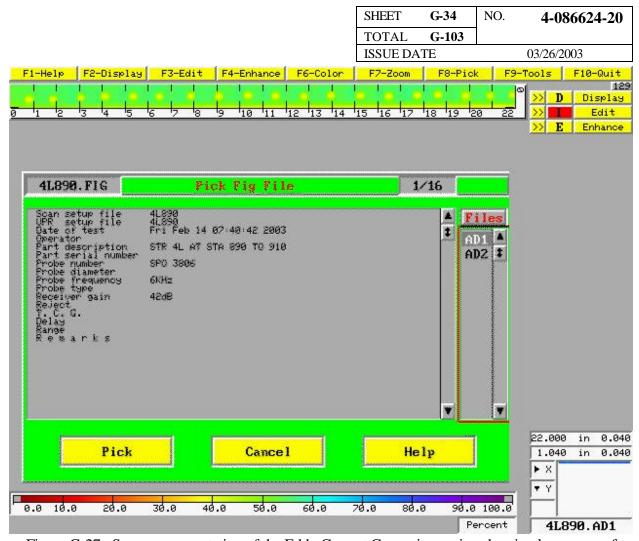


Figure G-27. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 890 and BS 910.

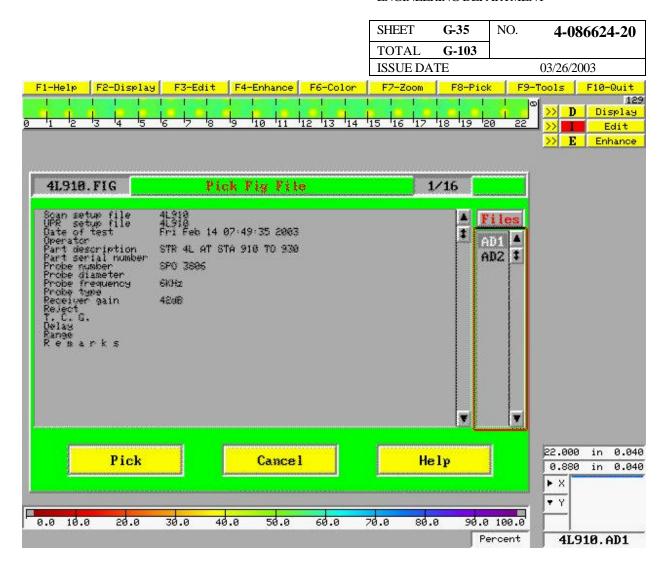


Figure G-28. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 910 and BS 930.

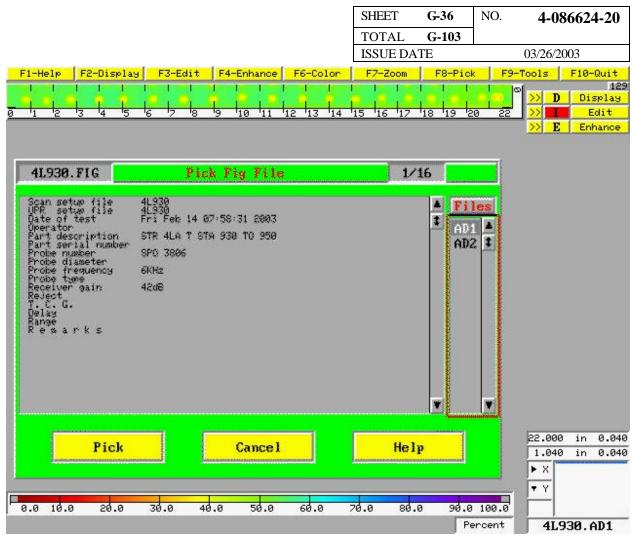


Figure G-29. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 930 and BS 950.

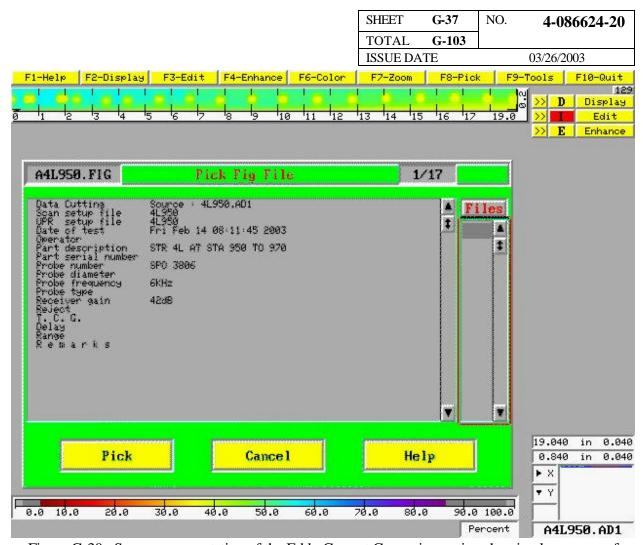


Figure G-30. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 950 and BS 950A.

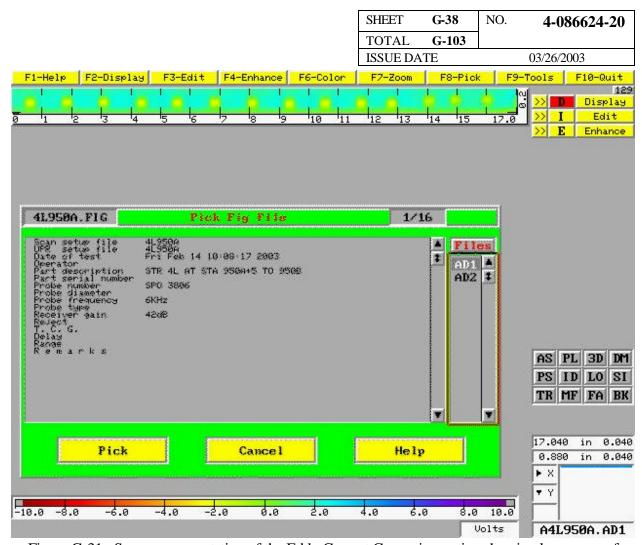


Figure G-31. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 950A and BS 950B.

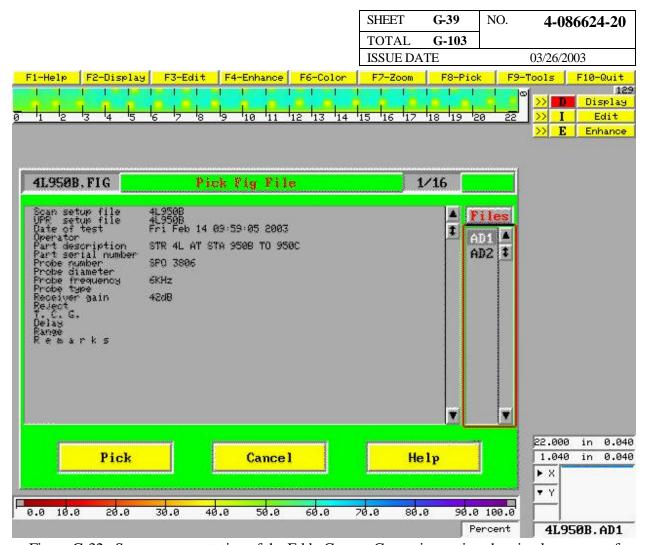


Figure G-32. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 950B and BS 950C.

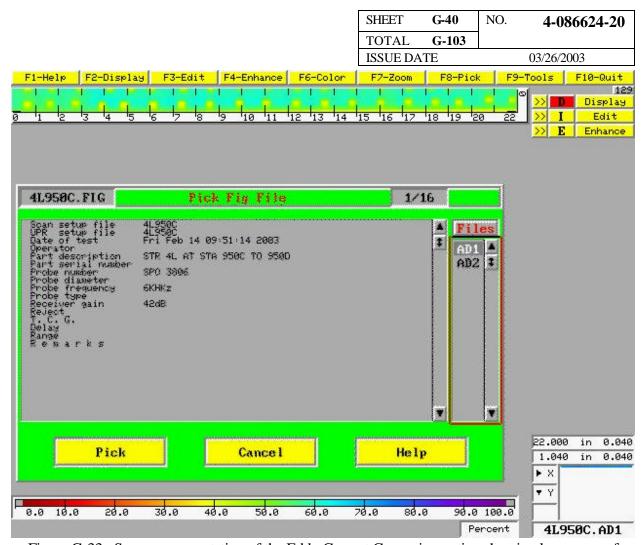


Figure G-33. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 950C and BS 950D.

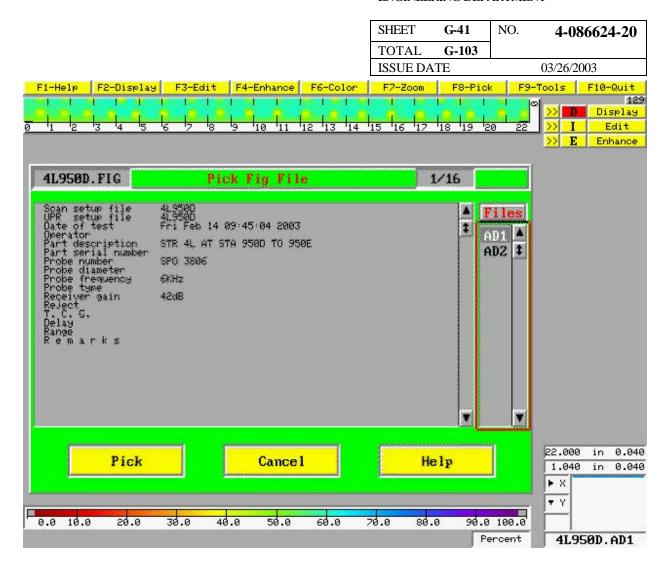


FIGURE G-34. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 950D and BS 950E.

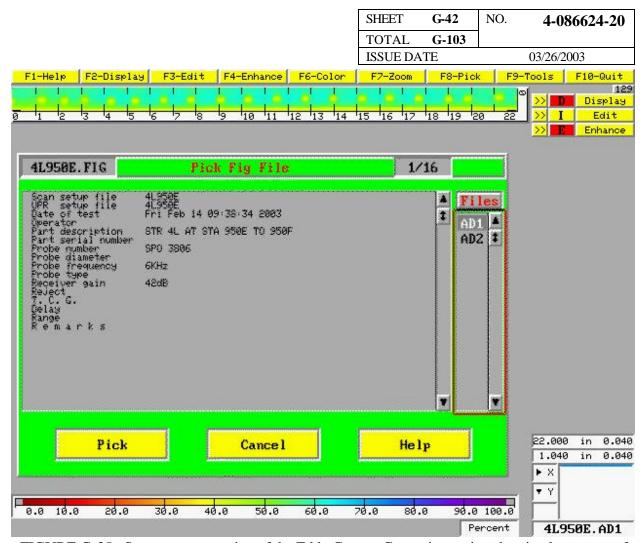


FIGURE G-35. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 950E and BS 950F.

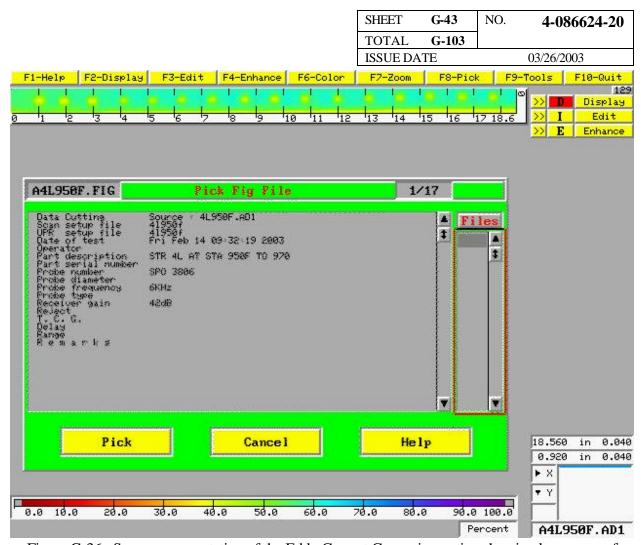


Figure G-36. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 950F and BS 970.

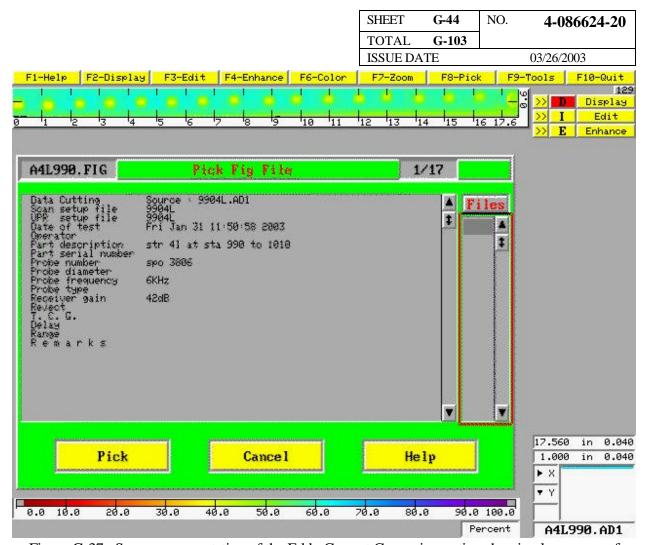


Figure G-37. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 990 and BS 1010.

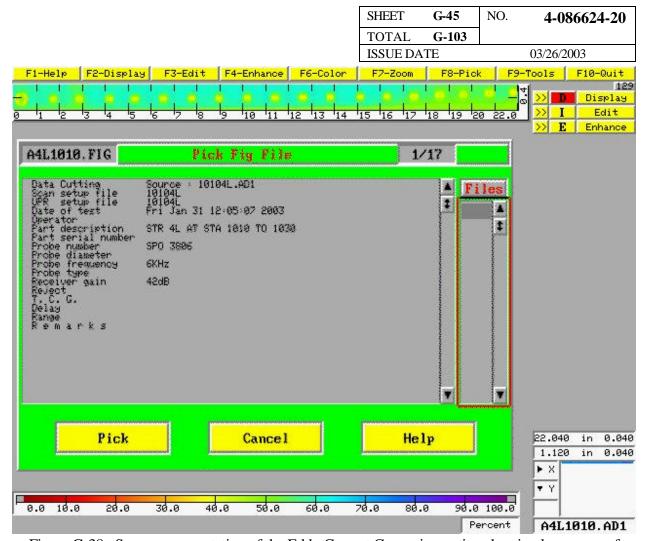


Figure G-38. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 1010 and BS 1030.

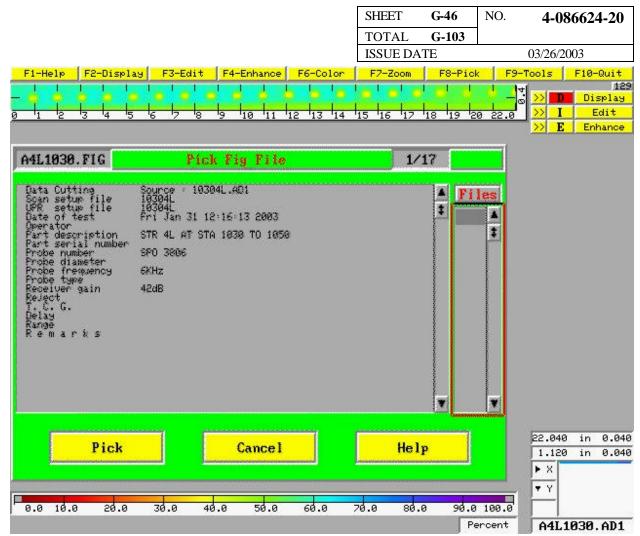


Figure G-39. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 1030 and BS 1050.

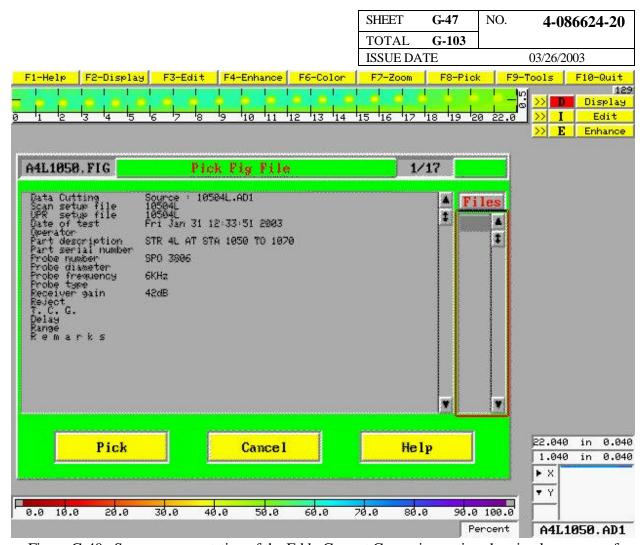


Figure G-40. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 1050 and BS 1070.

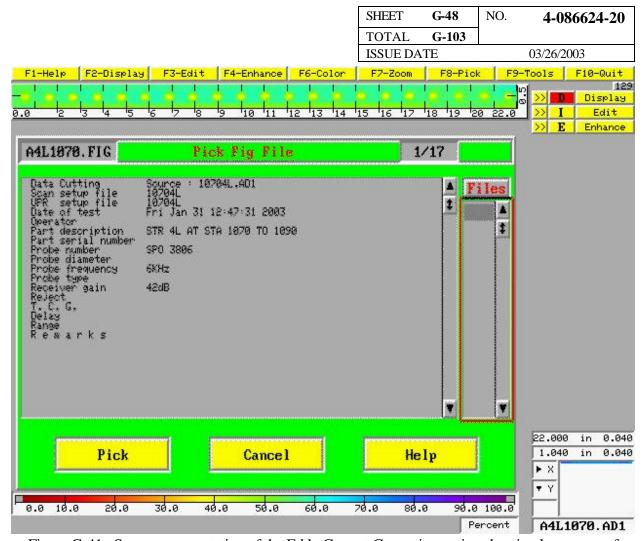


Figure G-41. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4L, between BS 1070 and BS 1090.

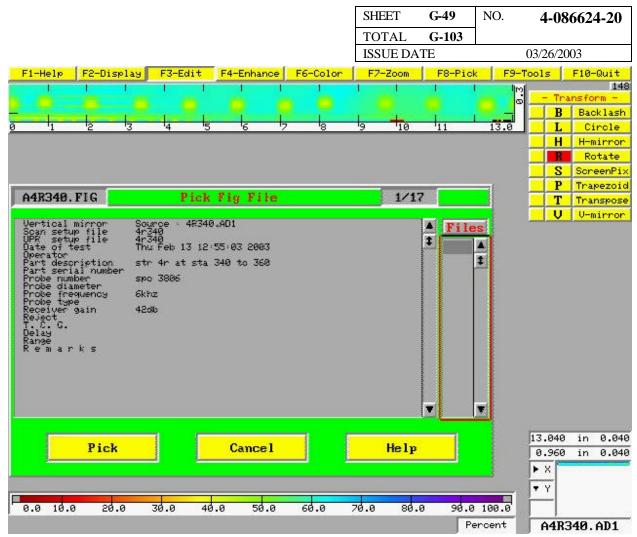


Figure G-42. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 350 and BS 360.

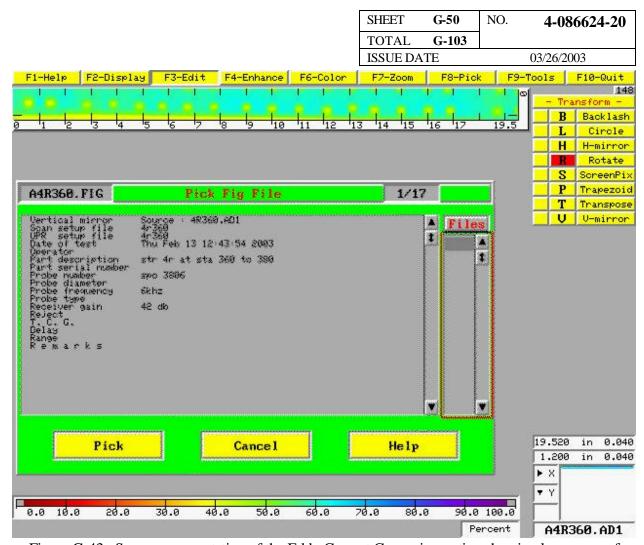


Figure G-43. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 360 and BS 380.

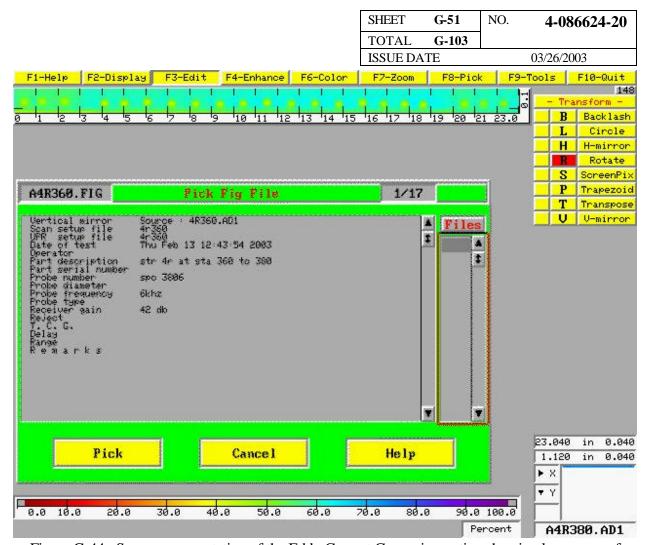


Figure G-44. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 380 and BS 400.

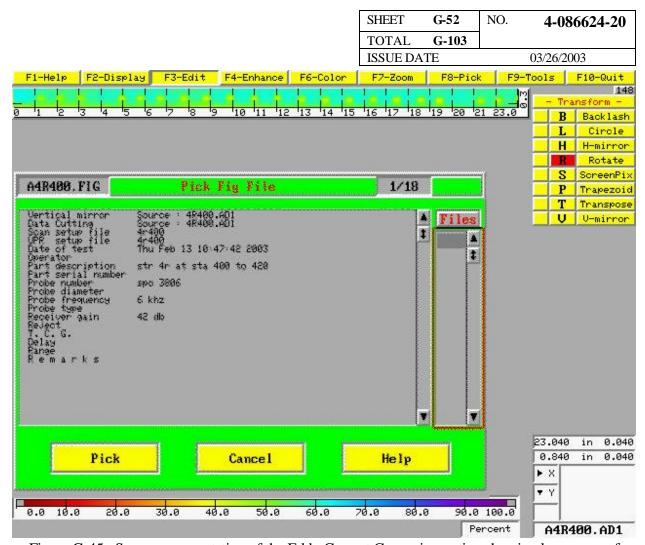


Figure G-45. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 400 and BS 420.

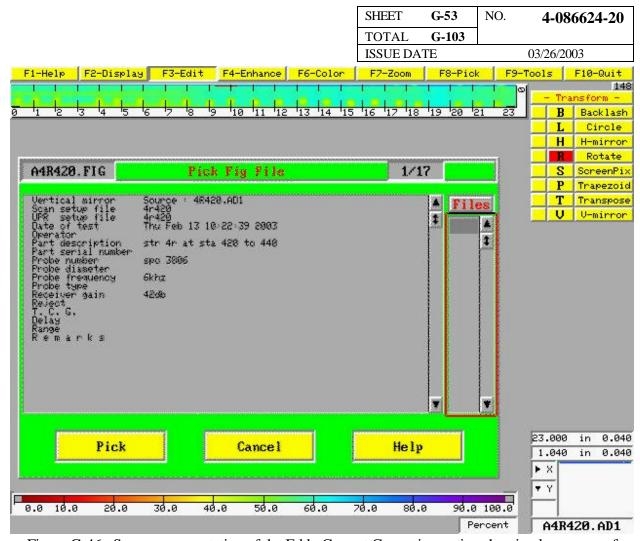


Figure G-46. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 420 and BS 440.

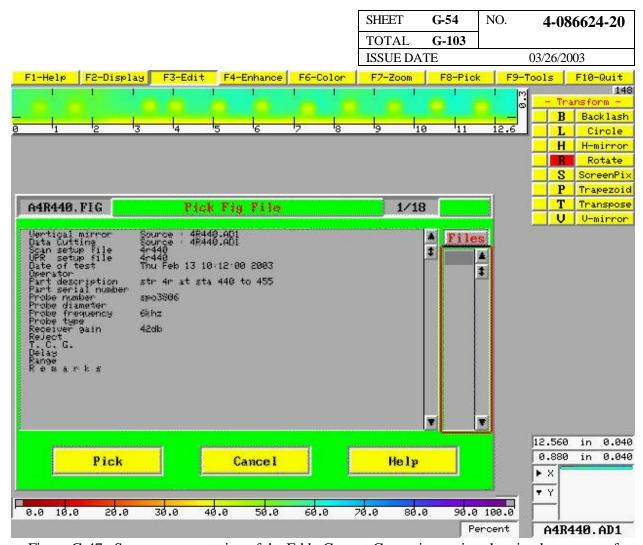


Figure G-47. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 440 and BS 460.

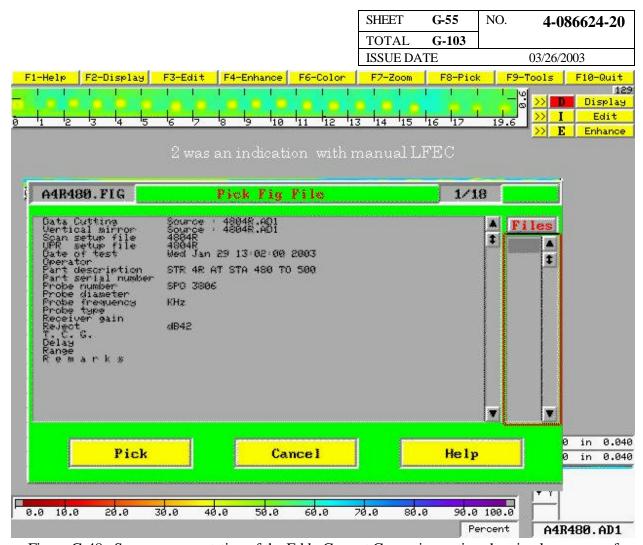


Figure G-48. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 480 and BS 500.

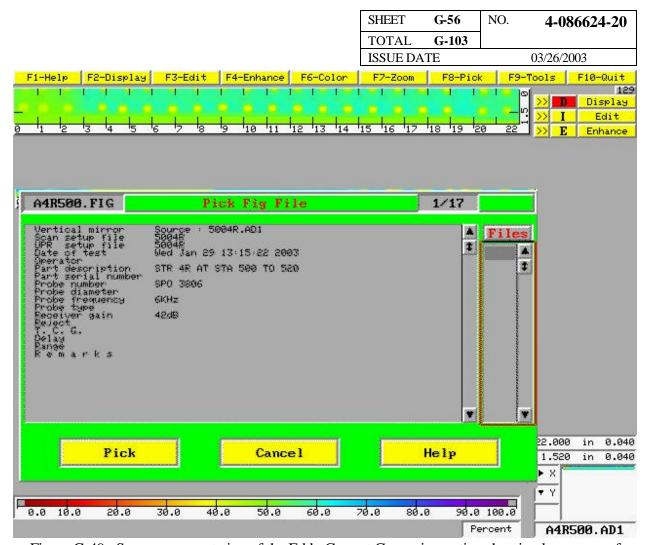


Figure G-49. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 500 and BS 520.

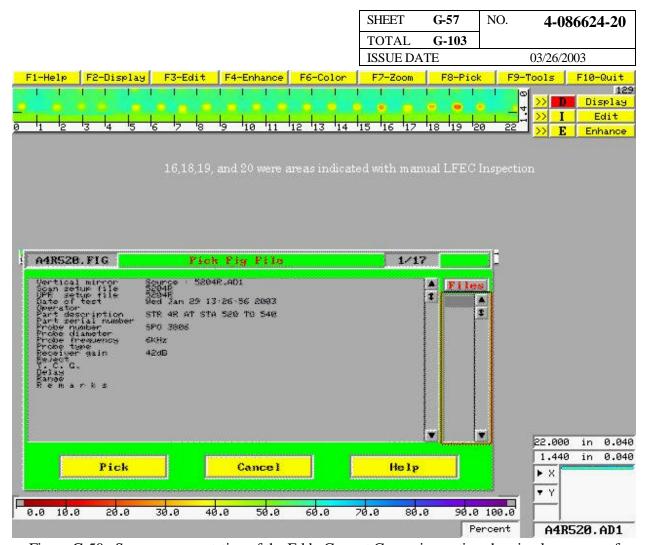


Figure G-50. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 520 and BS 540.

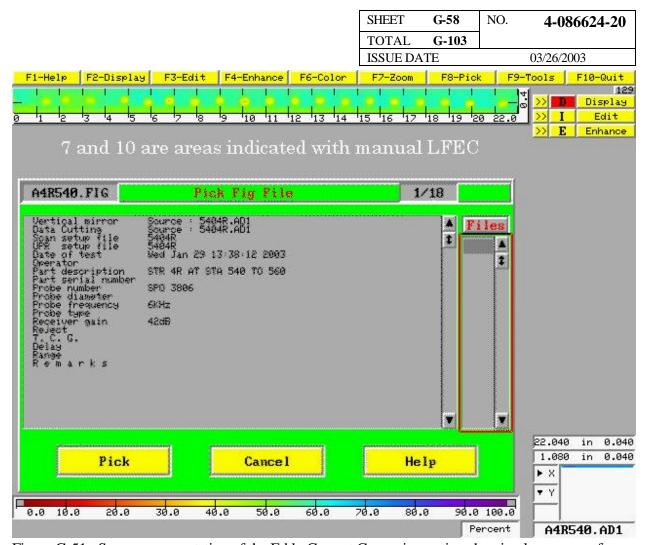


Figure G-51. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 540 and BS 560.

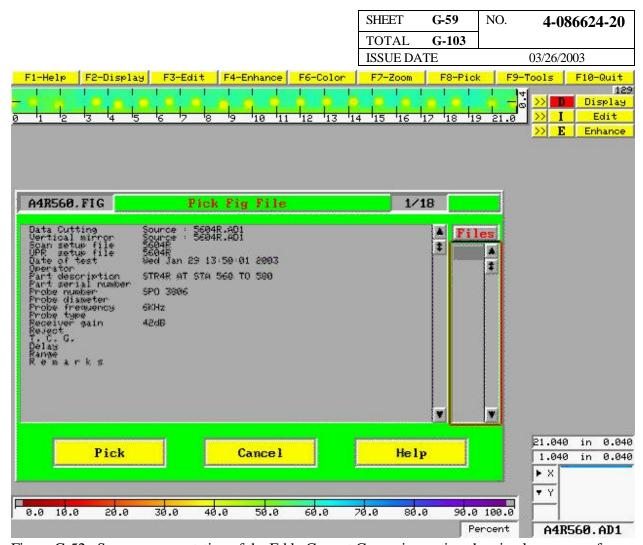


Figure G-52. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 560 and BS 580.

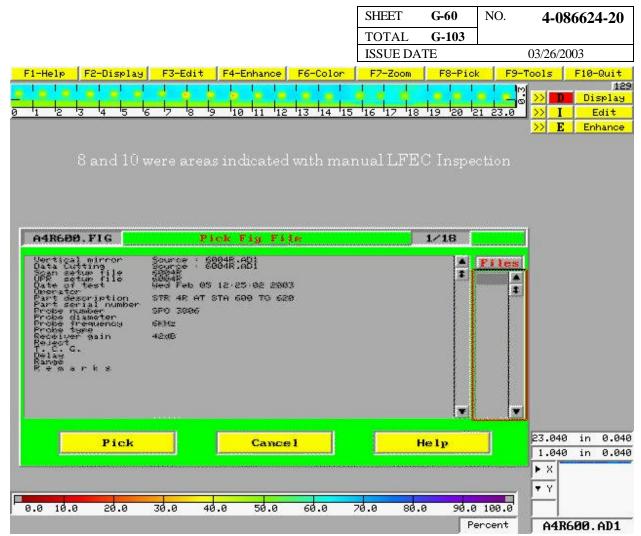


Figure G-53. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 600 and BS 620.

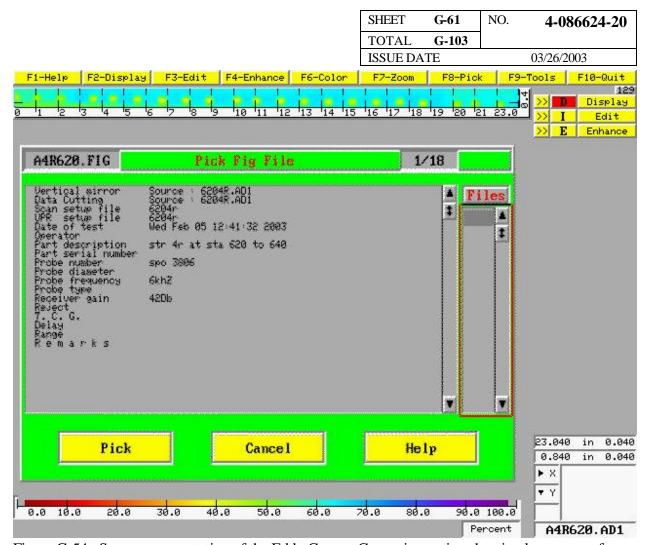


Figure G-54. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 620 and BS 640.

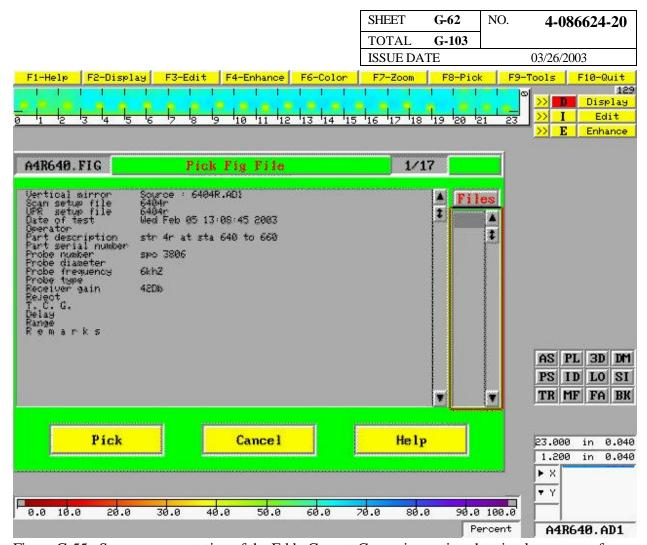


Figure G-55. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 640 and BS 660.

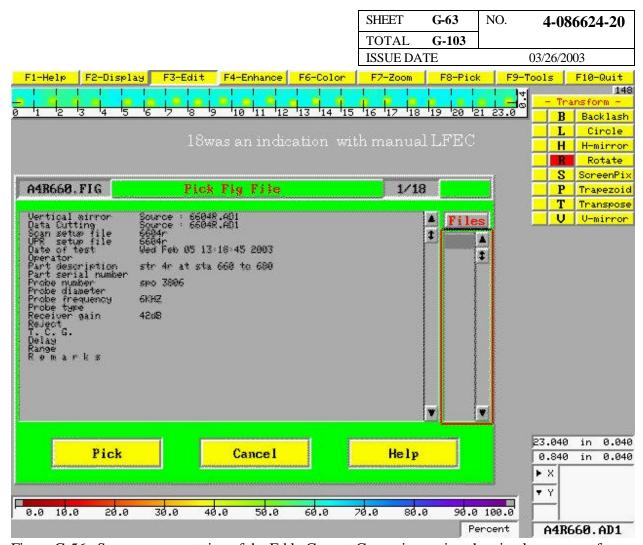


Figure G-56. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 660 and BS 680.

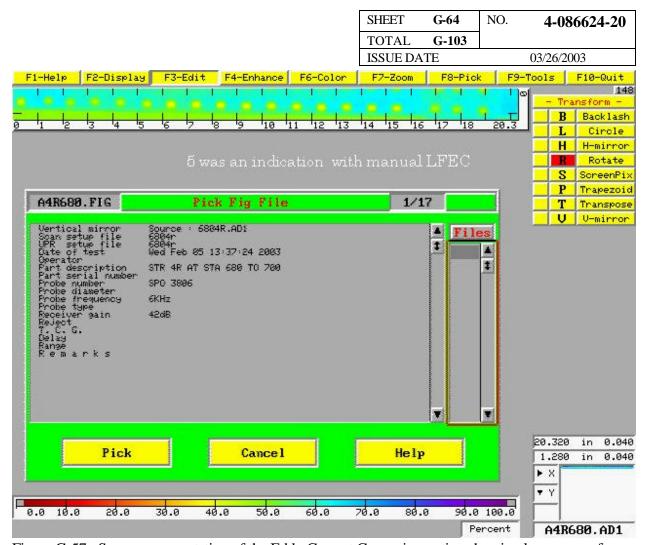


Figure G-57. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 680 and BS 700.

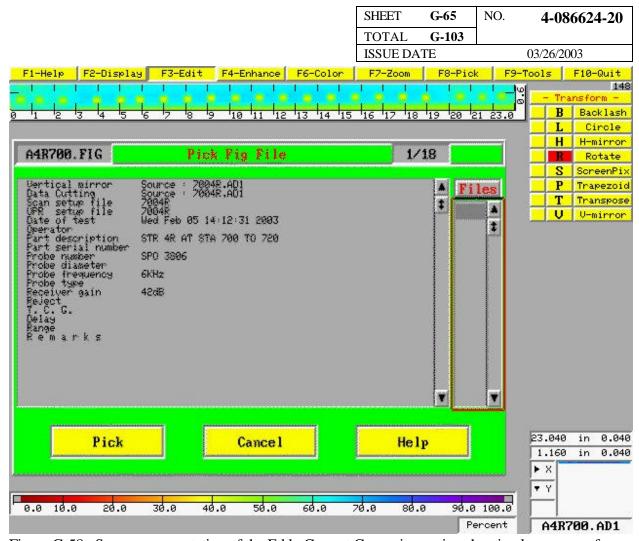


Figure G-58. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 700 and BS 720.

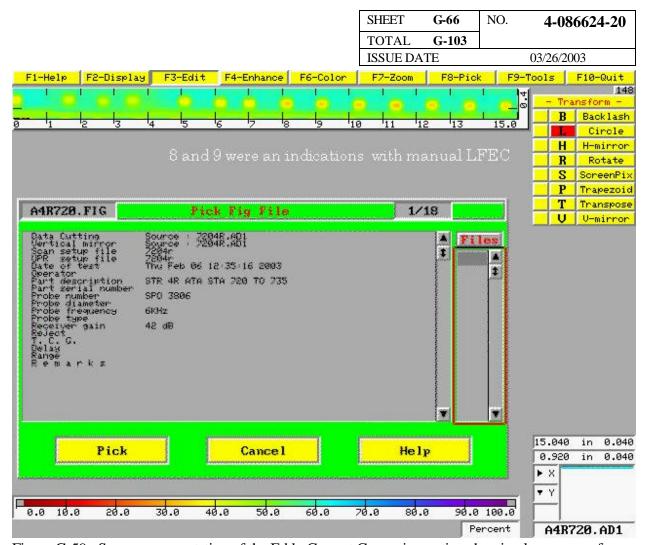


Figure G-59. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 720 and BS 720A.

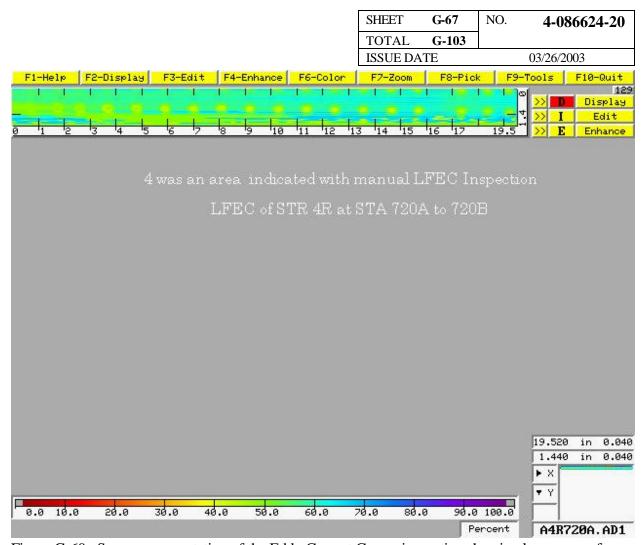


Figure G-60. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 720A and BS 720B.

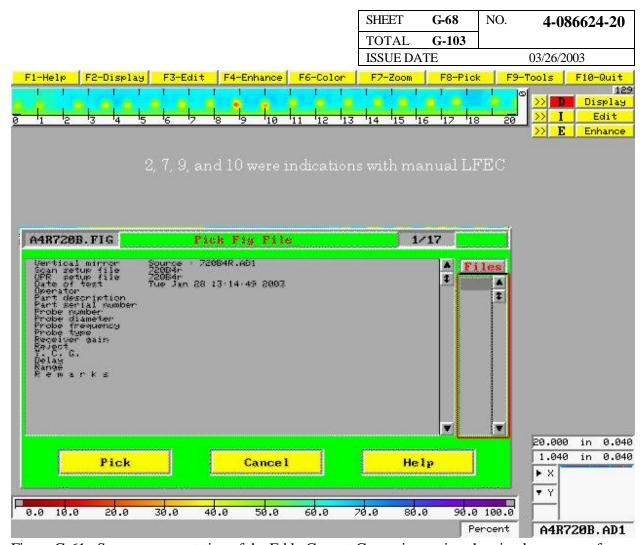


Figure G-61. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 720B and BS 720C.

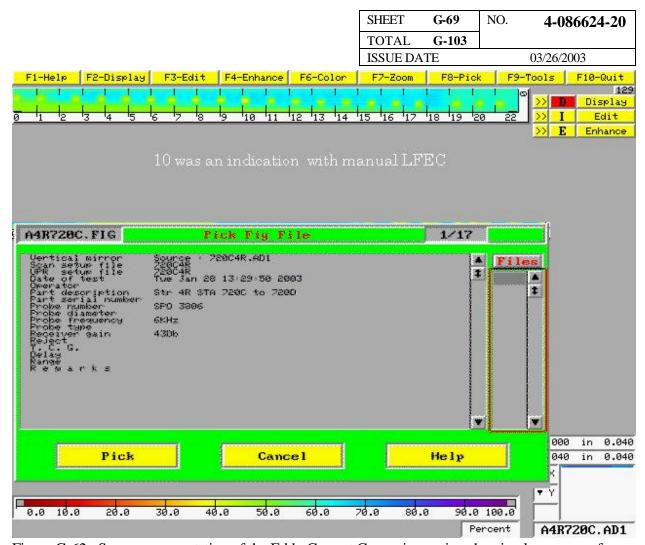


Figure G-62. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 720C and BS 720D.

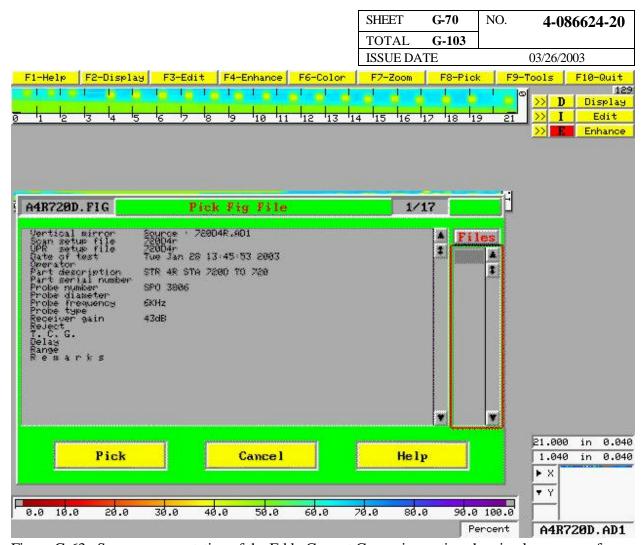


Figure G-63. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 720D and BS 720E.

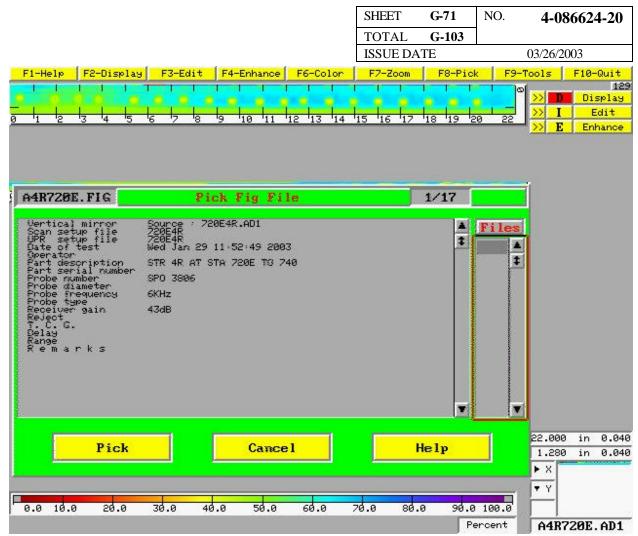


Figure G-64. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 720E and BS 740.

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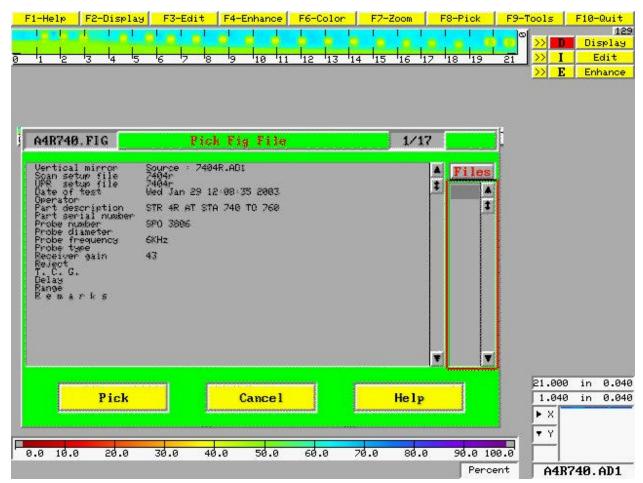


Figure G-65. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 740 and BS 760.

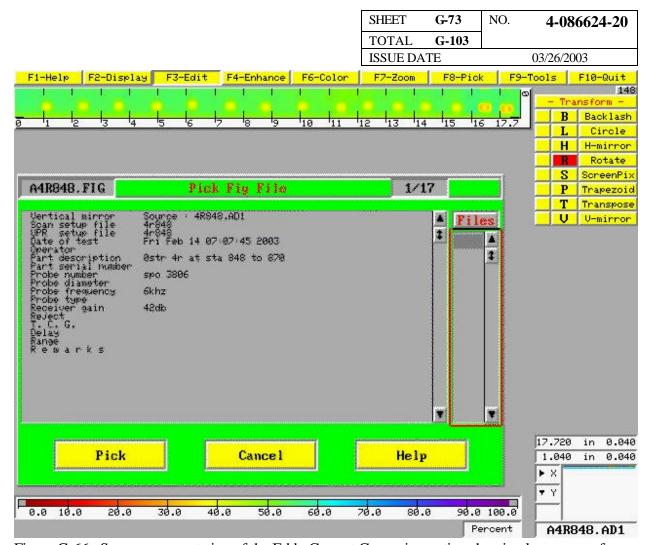


Figure G-66. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 848 and BS 870.

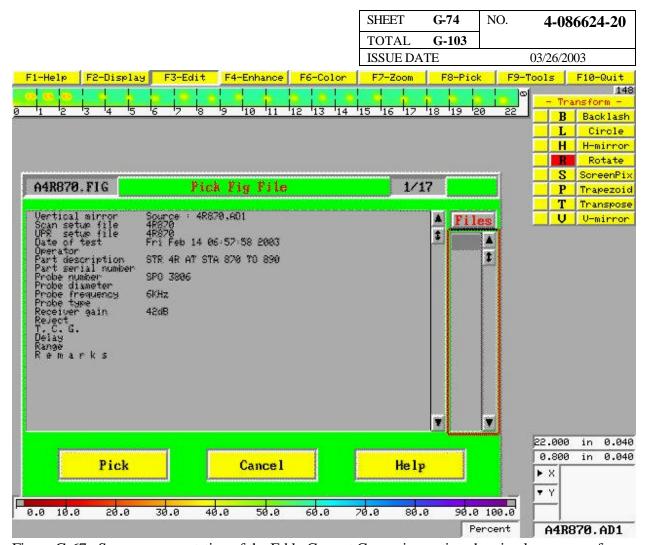


Figure G-67. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 870 and BS 890.

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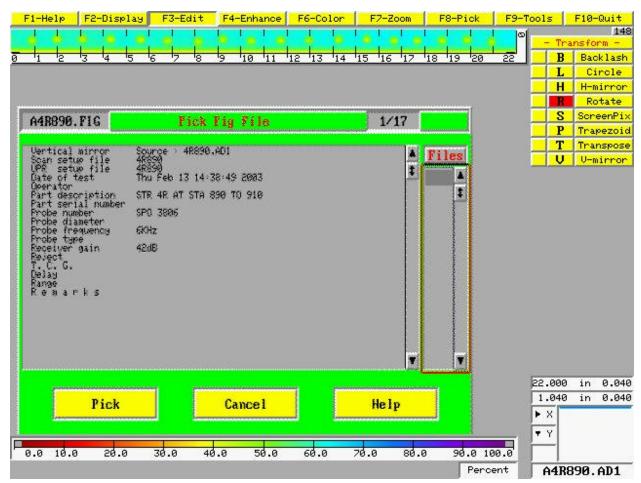


Figure G-68. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 890 and BS 910.

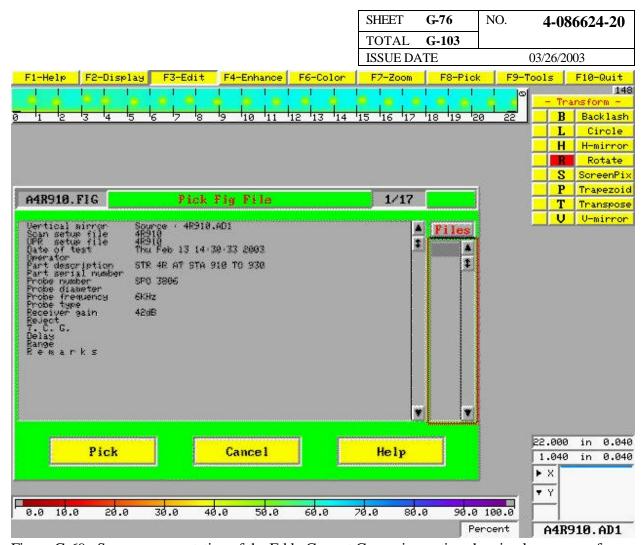


Figure G-69. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 910 and BS 930.

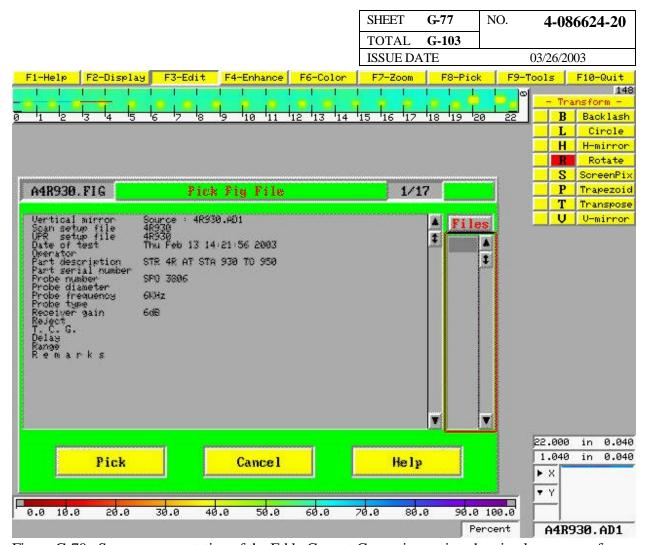


Figure G-70. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 930 and BS 950.

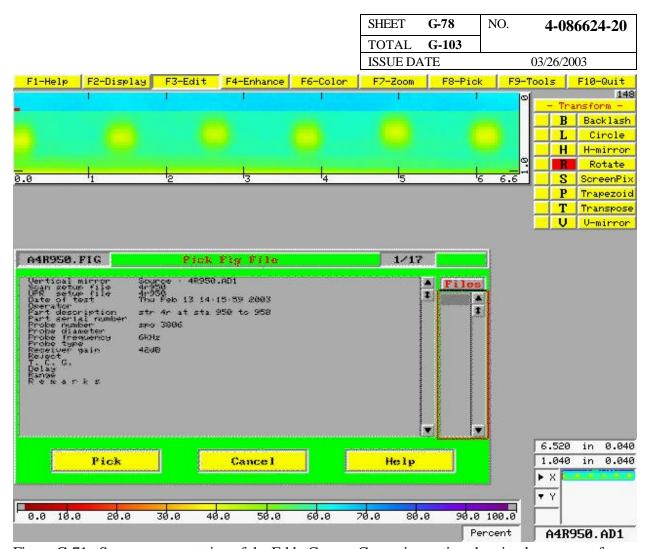


Figure G-71. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 950 and BS 950A.

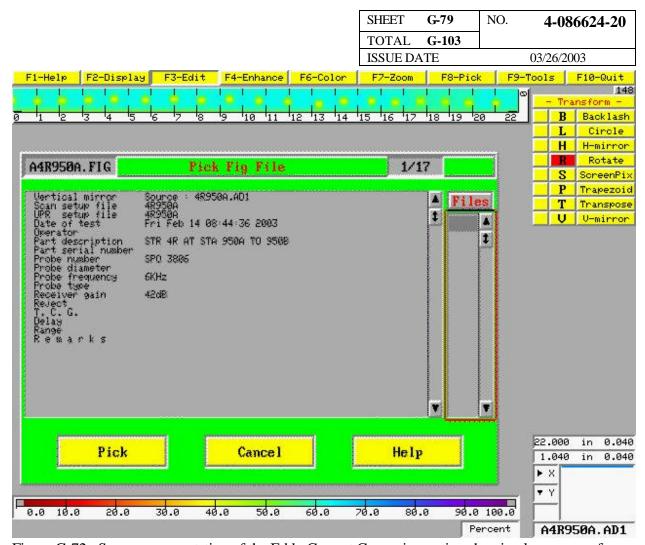


Figure G-72. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 950A and BS 950B.

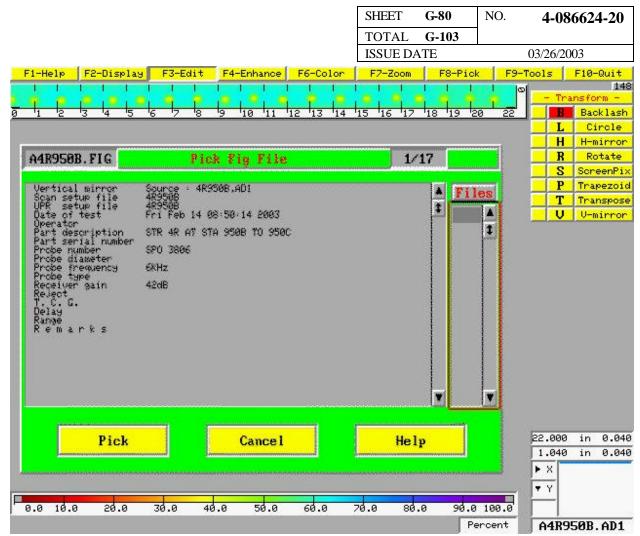


Figure G-73. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 950B and BS 950C.

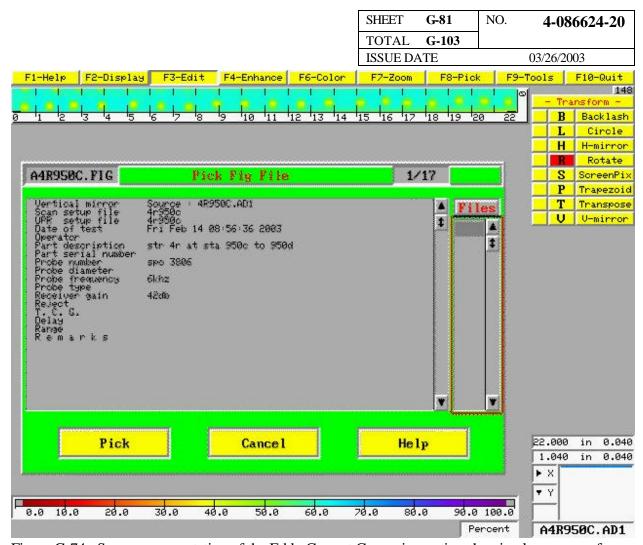


Figure G-74. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 950C and BS 950D.

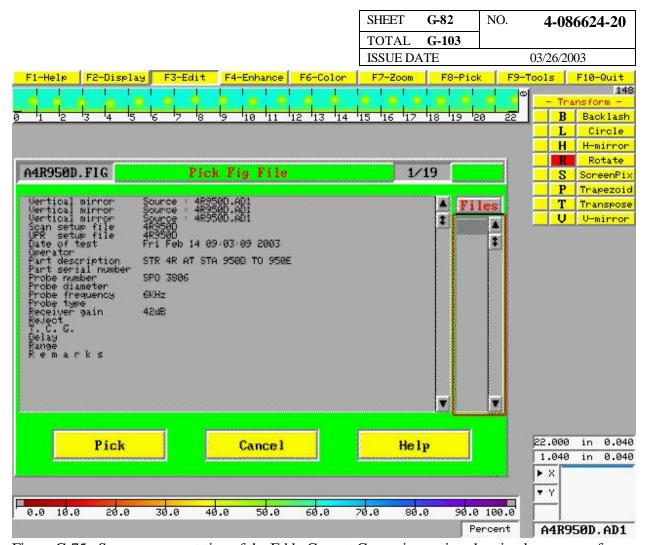


Figure G-75. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 950D and BS 950E.

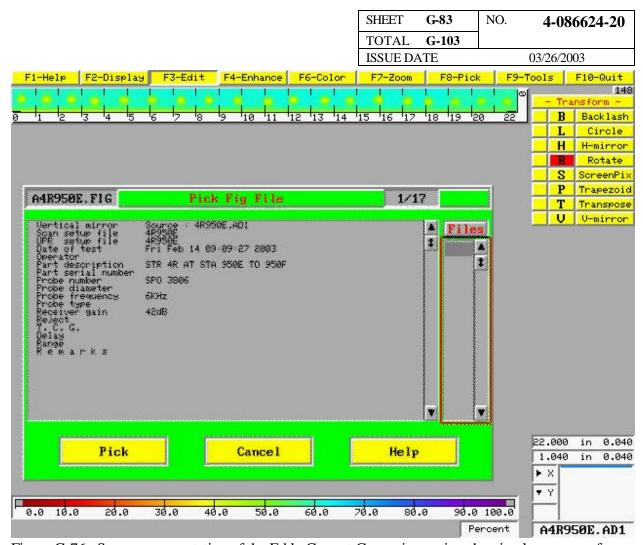


Figure G-76. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 950E and BS 950F.

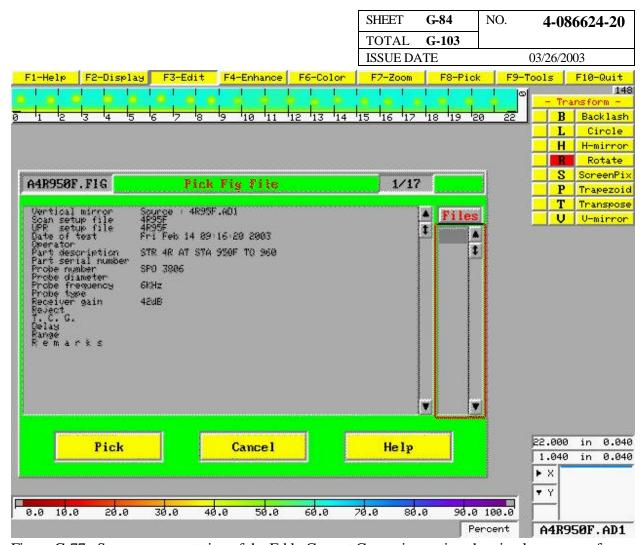


Figure G-77. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 950F and BS 970.

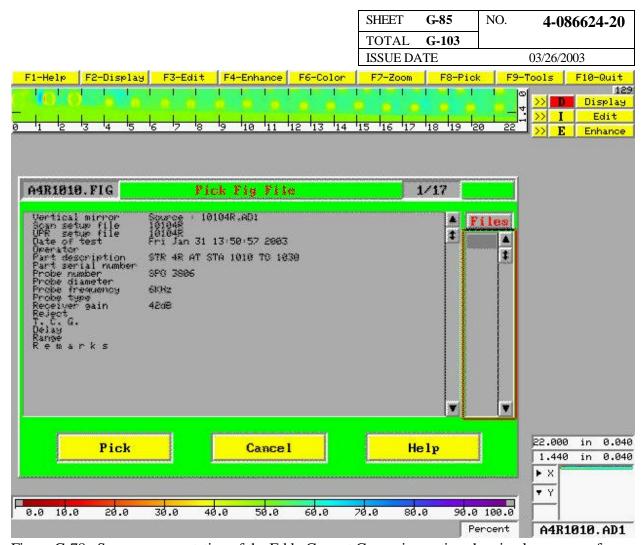


Figure G-78. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 1010 and BS 1030.

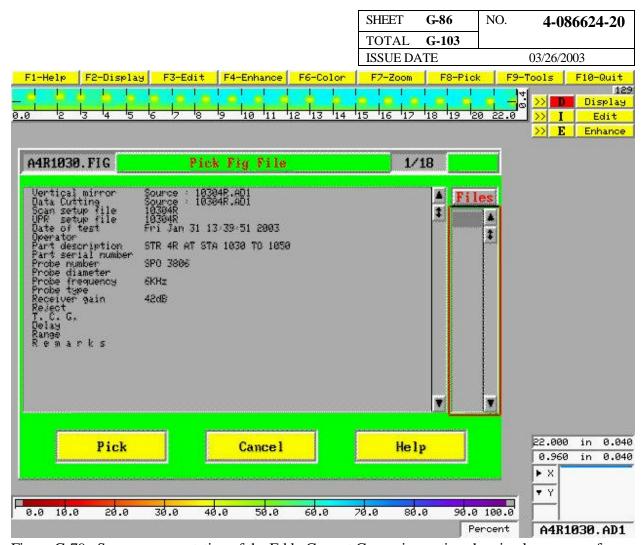


Figure G-79. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 1030 and BS 1050.

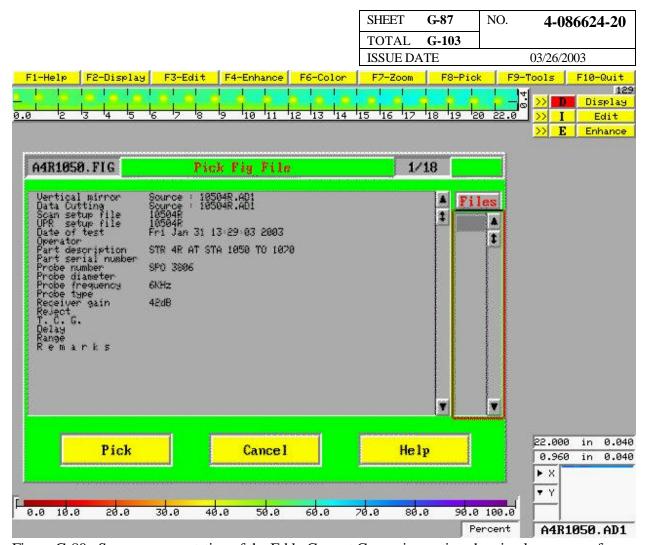


Figure G-80. Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 1050 and BS 1070.

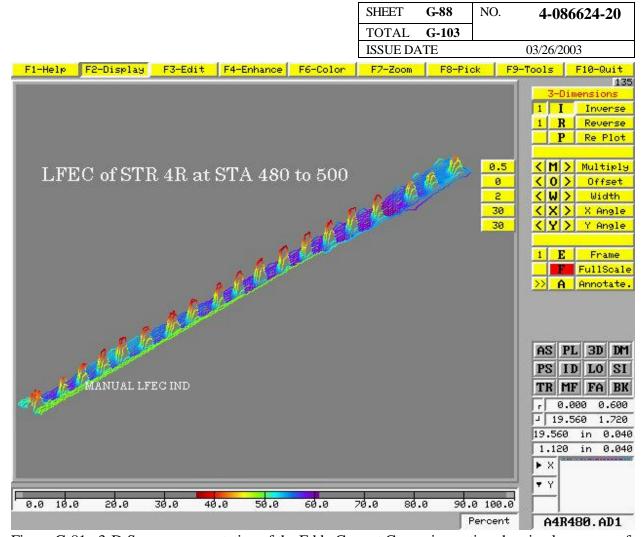


Figure G-81. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 480 and BS 500.

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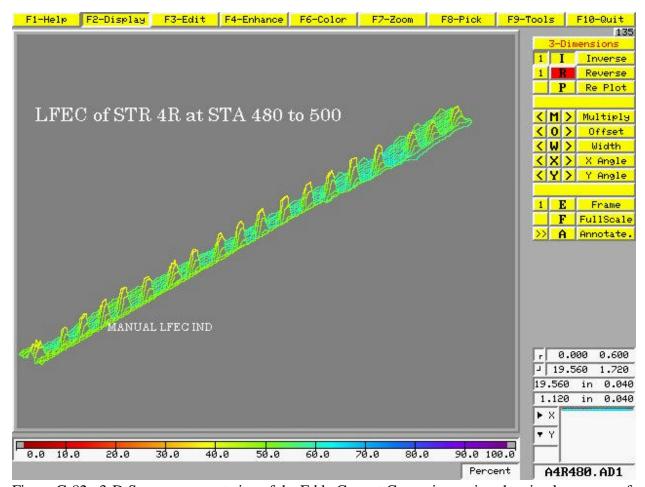


Figure G-82. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 480 and BS 500.

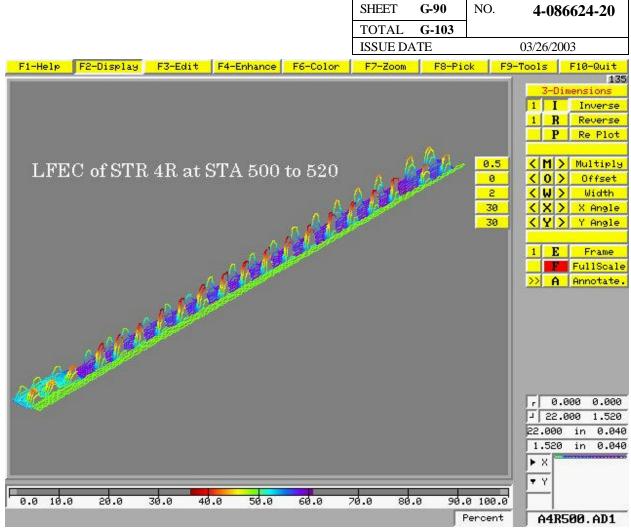


Figure G-83. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 500 and BS 520.

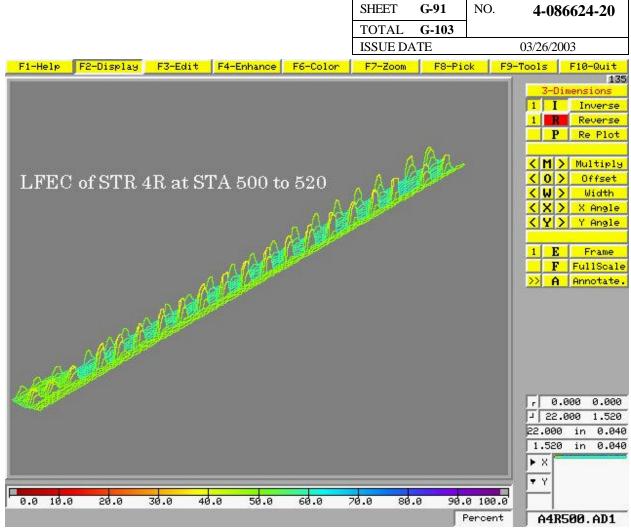


Figure G-84. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 500 and BS 520.

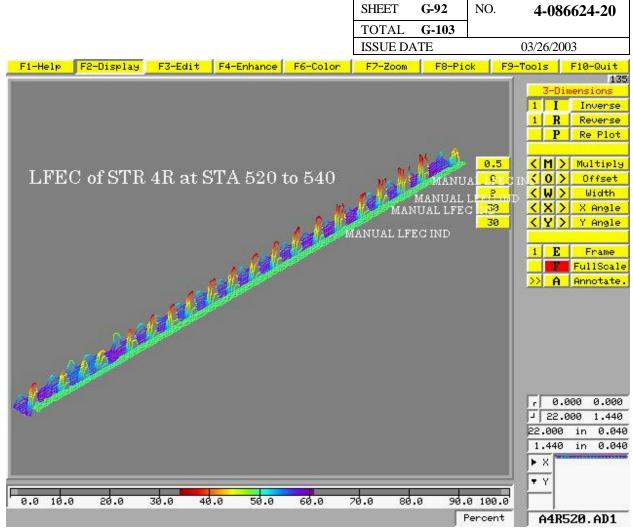


Figure G-85. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 520 and BS 540.

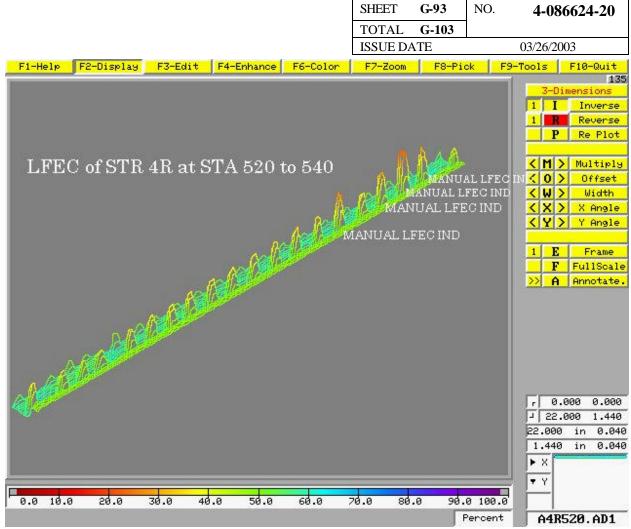


Figure G-86. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 520 and BS 540.

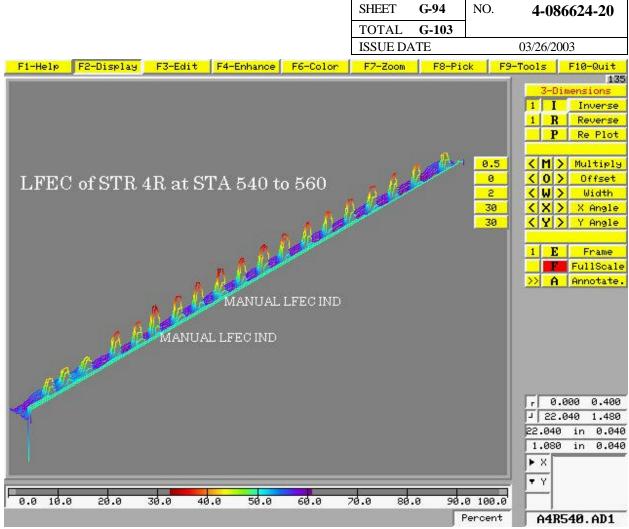


Figure G-87. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 540 and BS 560.

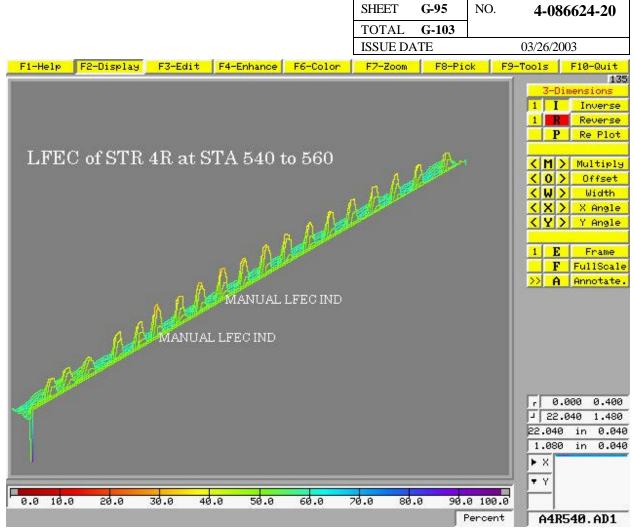


Figure G-88. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 540 and BS 560.

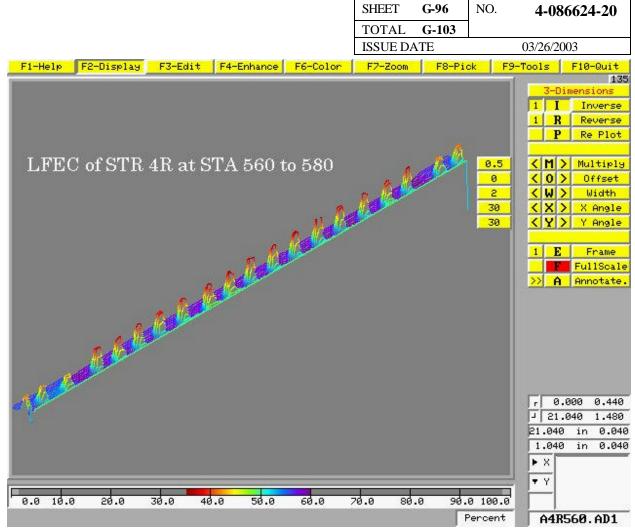


Figure G-89. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 560 and BS 580.

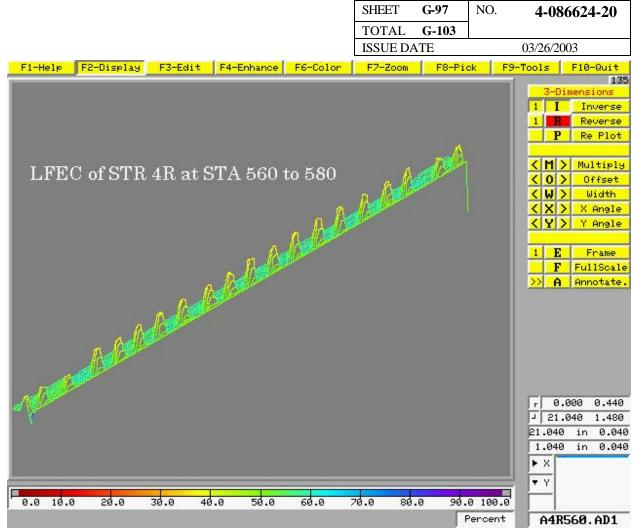


Figure G-90. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 560 and BS 580.

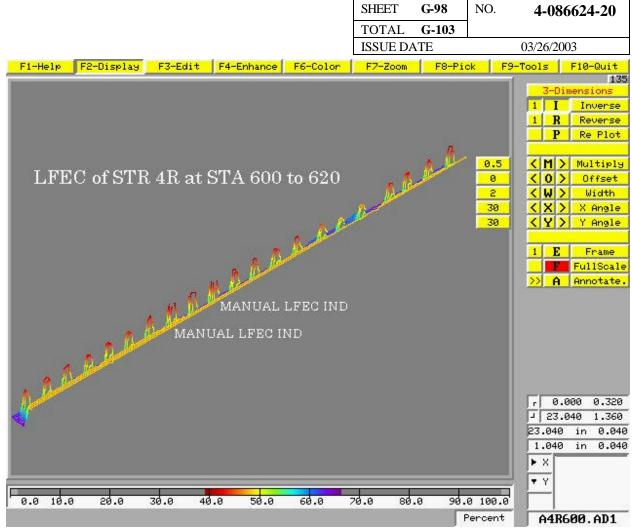


Figure G-91. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 600 and BS 620.

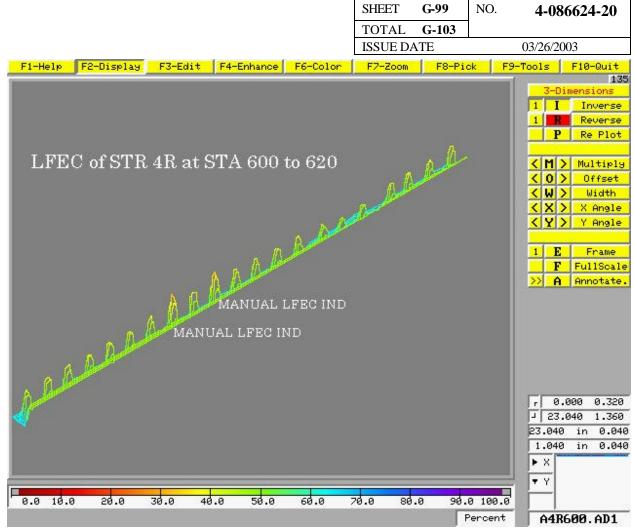


Figure G-92. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 600 and BS 520.

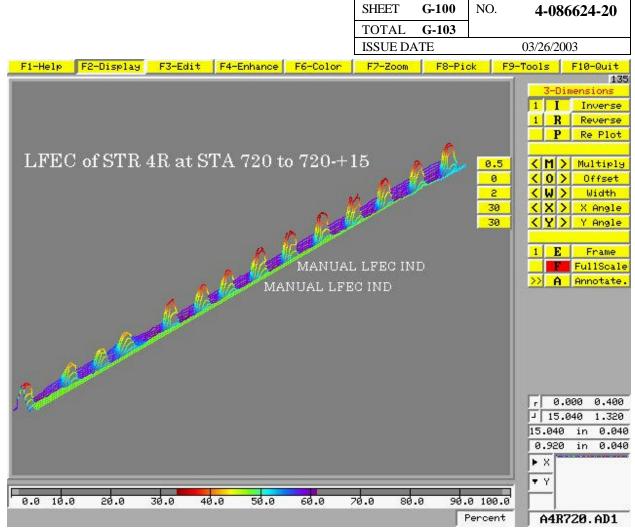


Figure G-93. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 720 and BS 720A.

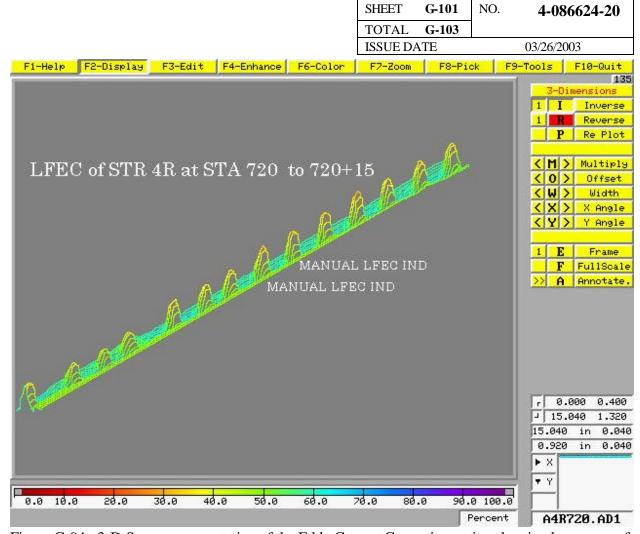


Figure G-94. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 720 and BS 720A.

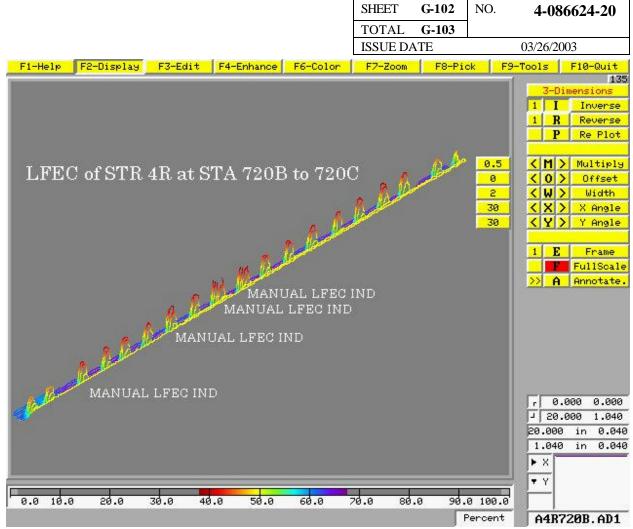


Figure G-95. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 720A and BS 720B.

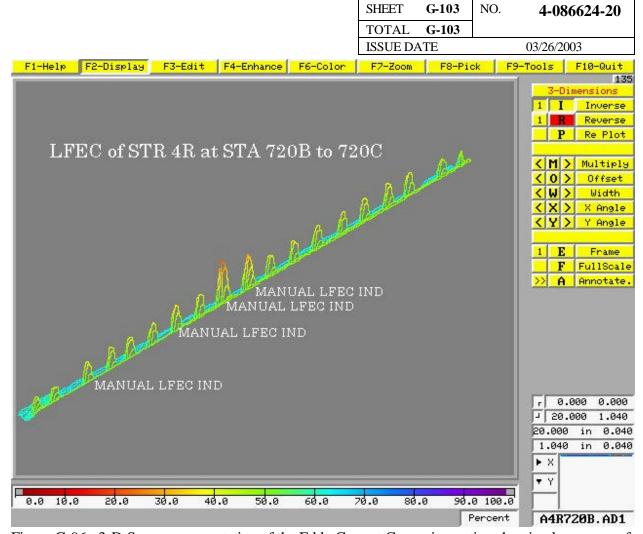


Figure G-96. 3-D Screen representation of the Eddy Current C-scan inspection showing lower row of fasteners on stringer 4R, between BS 720A and BS 720B.

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# APPENDIX H

# PHOTOGRAPHS AND SCREEN REPRESENTATIONS OF ULTRASONIC TEAR STRAP INDICATIONS

# **LIST OF FIGURES**

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FIGURE H-3 Photograph of location of tear strap indication at BS 740 between stringers 8R and 9RH-4
FIGURE H-4 Photograph of location of tear strap indication at BS 740 between stringers 8L and 9L.
FIGURE H-5 Photograph of location of tear strap indication at BS 740 between stringers 4L and 5LH-5
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FIGURE H-7 Screen representation of tear strap indication at BS 740 between stringers 3L and 4LH-6
FIGURE H-8 Photograph showing internal view of tear strap indication area at BS 740 between stringers 3L and 4L. No explanation could be found
FIGURE H-9 Photograph showing internal view of tear strap indication area at BS 740 between stringers 3L and 4L. No explanation could be found
FIGURE H-10 Photograph showing internal view of tear strap indication area at BS 740 between stringers 3L and 4L. No explanation could be found
FIGURE H-11 Photograph showing internal view of tear strap indication area at BS 740 between stringers 8R and 9R. No explanation could be found
PODDIETARY DATA - RESTRICTED DISTRIBUTION - CONTROLLED BY TERMS OF EAA AGREEMENT

SHEET	H-2	NO.	4-086624-20
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FIGURE H-12 Screen representation of tear strap indication at BS 360 between stringers 2R and 4R
FIGURE H-13 Photograph of location of tear strap indication at BS 360 between stringers 2R and 4RH-9
FIGURE H-14 Photograph of location of tear strap indication at BS 360 between stringers 4R and 6RH-10
FIGURE H-15 Photograph of location of tear strap indication at BS 360 between stringers 6R and 8RH-10
FIGURE H-16 Photograph of location of tear strap indication at BS 360 between stringers 2L and 3L
FIGURE H-17 Photograph of location of tear strap indication at BS 360 between stringers 2L and 3L
FIGURE H-18 Screen representation of tear strap indication at BS 360 between stringers 2L and

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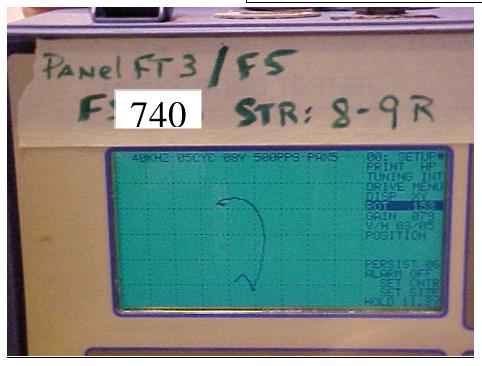


Figure H-1. Screen representation of tear strap indication at BS 740 between stringers 8R and 9R.

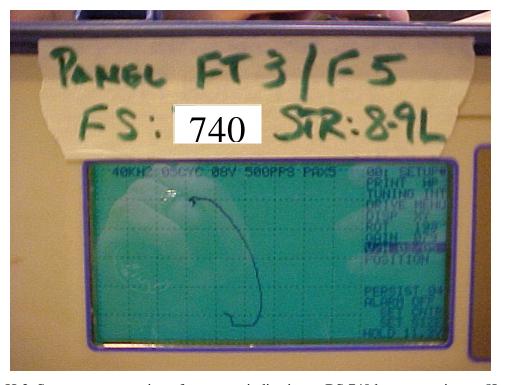


Figure H-2. Screen representation of tear strap indication at BS 740 between stringers 8L and 9L.

SHEET	H-4	NO.	4-086624-20
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ISSUE DATE			03/26/2003



Figure H-3. Photograph of location of tear strap indication at BS 740 between stringers 8R and 9R.

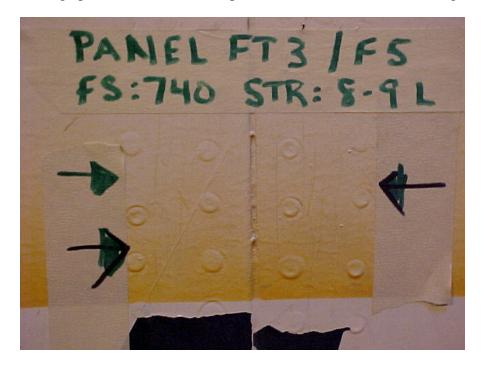


Figure H-4. Photograph of location of tear strap indication at BS 740 between stringers 8L and 9L.

SHEET	H-5	NO.	4-086624-20
TOTAL	H-12		
ISSUE DAT	ISSUE DATE		03/26/2003

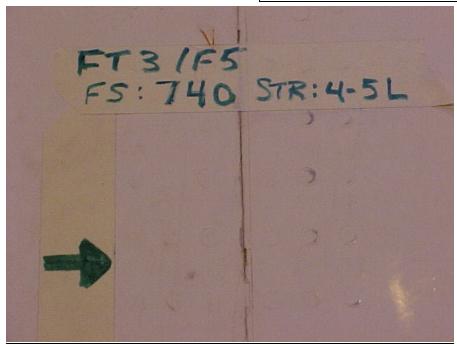


Figure H-5. Photograph of location of tear strap indication at BS 740 between stringers 4L and 5L.



Figure H-6. Photograph of location of tear strap indication at BS 740 between stringers 3L and 4L.

SHEET	H-6	NO.	4-086624-20
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Figure H-7. Screen representation of tear strap indication at BS 740 between stringers 3L and 4L.

SHEET	H-7	NO.	4-086624-20
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Figure H-8. Photograph showing internal view of tear strap indication area at BS 740 between stringers 3L and 4L. No explanation for the indication could be found.

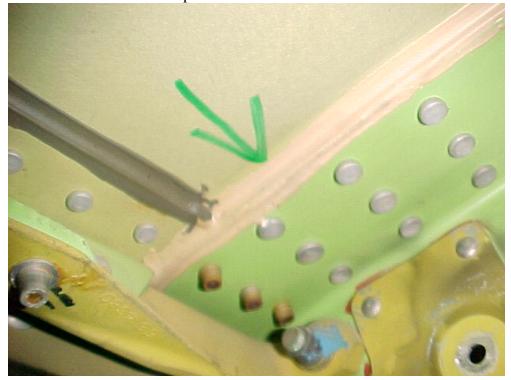


Figure H-9. Photograph showing internal view of tear strap indication area at BS 740 between stringers 3L and 4L. No explanation for the indication could be found.

PROPRIETARY DATA - RESTRICTED DISTRIBUTION - CONTROLLED BY TERMS OF FAA AGREEMENT

SHEET	H-8	NO.	4-086624-20
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Figure H-10. Photograph showing internal view of tear strap indication area at BS 740 between stringers 3L and 4L. No explanation for the indication could be found.



Figure H-11. Photograph showing internal view of tear strap indication area at BS 740 between stringers 8R and 9R. No explanation for the indication could be found.

SHEET	H-9	NO.	4-086624-20
TOTAL	H-12		
ISSUE DAT	ISSUE DATE		03/26/2003

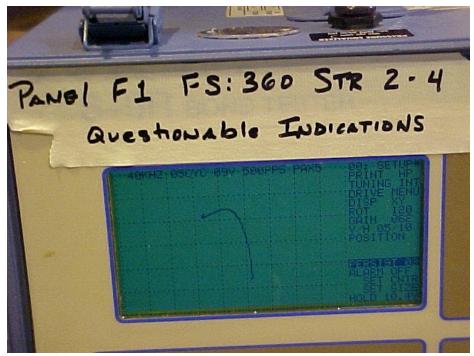


Figure H-12. Screen representation of tear strap indication at BS 360 between stringers 2R and 4R.

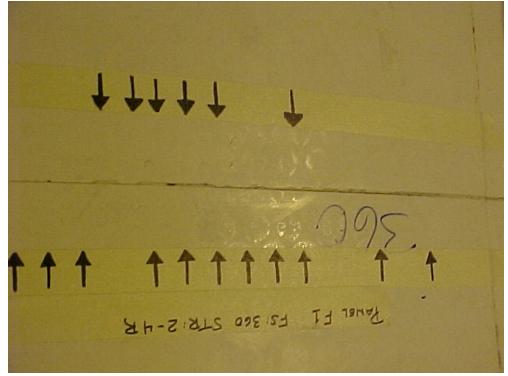


Figure H-13. Photograph of location of tear strap indication at BS 360 between stringers 2R and 4R.

SHEET	H-10	NO.	4-086624-20
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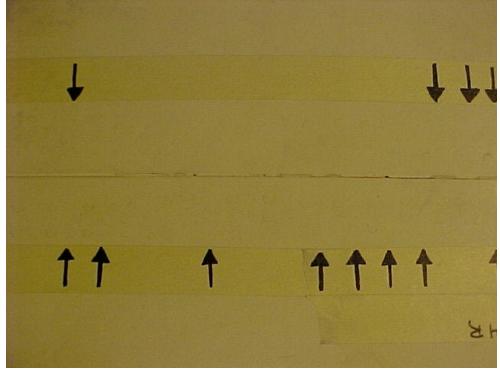


Figure H-14. Photograph of location of tear strap indication at BS 360 between stringers 4R and 6R.

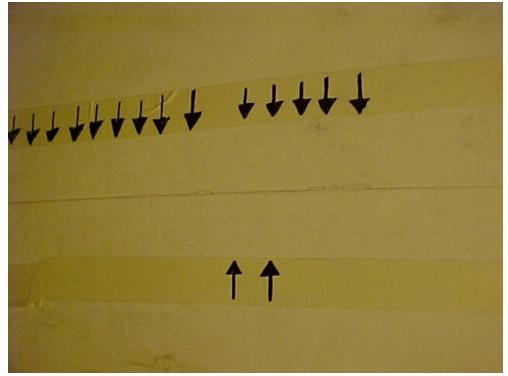


Figure H-15. Photograph of location of tear strap indication at BS 360 between stringers 6R and 8R.

SHEET	H-11	NO.	4-086624-20
TOTAL	H-12		
ISSUE DAT	ΓE		03/26/2003

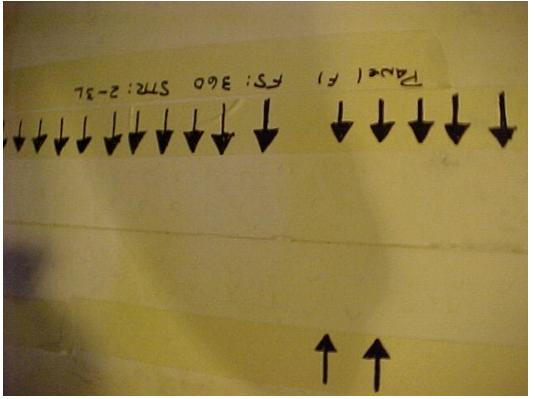


Figure H-16. Photograph of location of tear strap indication at BS 360 between stringers 2L and 3L.

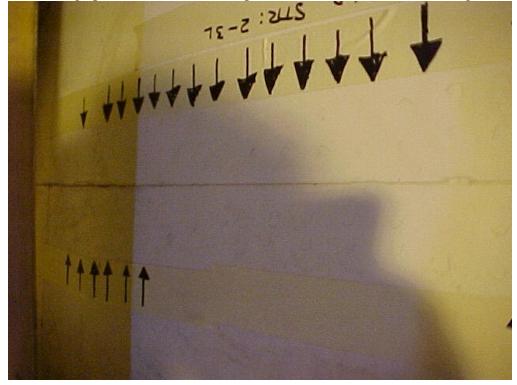


Figure H-17. Photograph of location of tear strap indication at BS 360 between stringers 2L and 3L.

SHEET	H-12	NO.	4-086624-20
TOTAL	H-12		
ISSUE DAT	E		03/26/2003



Figure H-18. Screen representation of tear strap indication at BS 360 between stringers 2L and 4L.

SHEET	I-1	NO.	4-086624-20
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ISSUE DA	ATE		03/26/2003

### APPENDIX I

## DATABASE REPORT OF INDICATIONS

Key: -- Not Inspected
 NR Inspection returned a non-rejectable, crack-like indication
 DVI Detailed Visual
 LFEC Low Frequency Eddu Current
 NF Inspected, with no findings
 R Inspection returned a rejectable indication
 MFEC Medium Frequency Eddy Current
 MOI Magneto-Optical Imaging

Inspection		1101115 170 1015 1	100		
Query Field Inspections		Pre-Teardown Inspections	ions Fastener Parame		eters
FS 380+ 6:Str-4L+ 1:Lov	ver Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2895
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.094
FS 380+ 7.1:Str-4L+ 1:L0	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.291
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.09
FS 380+ 8.2:Str-4L+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2915
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.092
FS 400+ 3.7:Str-4L+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2745
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.095
FS 400+ 6:Str-4L+ 1:Lov	ver Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.29
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.09

O	FIUM FS 176 to FS 1	1103	1 4	ge 2 01 30
Ouery Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 400+ 7.1:Str-4L+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.284
Measured Length: Fwd 0 Aft 0	) MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 400+ 8.2:Str-4L+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2835
Measured Length: Fwd 0 Aft 0	) MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.092
FS 400+ 10.5:Str-4L+ 1:Lower Skin:Hole	•			
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.291
Measured Length: Fwd 0 Aft 0	) MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.09
FS 400+ 12.8:Str-4L+ 1:Lower Skin:Hole	•			
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.29
Measured Length: Fwd O Aft O	) MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 400+ 13.9:Str-4L+ 1:Lower Skin:Hole	•			
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2895
Measured Length: Fwd 0 Aft 0	) MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 400+ 16.2:Str-4L+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2535
Measured Length: Fwd 0 Aft 0	) MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088

O		FIUM FS 176 W FS 1	1103	1 43	<u>ze 5 01 56</u>
Query Field Inspections		Pre-Teardown Inspections		Fastener Param	eters
FS 400+ 18.5:Str-4L+ 1:l	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2535
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.088
FS 400+ 18.5:Str-4L+ 1:l	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2535
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.088
FS 420+ 4.8:Str-4L+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2855
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.085
FS 420+ 6:Str-4L+ 1:Low	ver Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2895
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.091
FS 420+ 7.1:Str-4L+ 1:Lc	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.285
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.092
FS 420+ 8.2:Str-4L+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
<b>LFEC</b>	MFEC(Aft)	<b>LFEC</b>	MFEC(Aft)	Tail Dia:	0.2875
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.085

Query		1101115 170 1015 1	100	1 111	<u>,c 1 01 00</u>
Field Inspections		Pre-Teardown Inspections		Fastener Param	eters
FS 420+ 12.8:Str-4L+ 1:l	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2895
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.083
FS 420+ 13.9:Str-4R+ 1:	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2835
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.084
FS 440+ 12.8:Str-4R+ 1:	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2895
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.084
FS 480+ 2.6:Str-4R+ 1:Le	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.087
FS 480+ 3.6:Str-4R+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.092
FS 480+ 5.7:Str-4R+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.089

Duerv				-
Field Inspections	Pre-Teardown Inspections		Fastener Param	ieters
FS 480+ 12.1:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2255
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.094
FS 500+ 7.9:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2245
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.092
FS 500+ 8.9:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.094
FS 500+ 10:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.09
FS 500+ 11:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd 0.15 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 500+ 12.1:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087

Inspection	From FS	178	to FS	1183 Page 6 of 38

Inspection From FS			178	to FS	1183	Page 6 of 3
Query Field Inspections		Pre-Teardown Inspections		Fastener Paran	neters	
FS 500+ 13.2:Str-4R+ 1	:Lower Skin:Hole					
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563	
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2195	
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0	
Inspector Comments:			C-scan	Grip:	0.085	
FS 500+ 14.2:Str-4R+ 1	:Lower Skin:Hole					
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563	
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22	
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0	
Inspector Comments:			C-scan	Grip:	0.091	
FS 520+ 4.7:Str-4R+ 1:L	ower Skin:Hole					
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563	
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2185	
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0	
Inspector Comments:			C-scan	Grip:	0.086	
FS 520+ 8.9:Str-4R+ 1:L	₋ower Skin:Hole					
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563	
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215	
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0	
Inspector Comments:			C-scan	Grip:	0.094	
FS 520+ 10:Str-4R+ 1:Lo	ower Skin:Hole					
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563	
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235	
Measured Length: Fwd	0.17 Aft 0	MOI	Rivetcheck	Flushness:	0	
Inspector Comments:			C-scan	Grip:	0.09	
FS 520+ 11:Str-4R+ 1:Lo	ower Skin:Hole					
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563	
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265	
Measured Length: Fwd	0.21 Aft 0	MOI	Rivetcheck	Flushness:	0	
Inspector Comments:			C-scan	Grip:	0.086	

Query	1101115 170 1015 1	100	1 11	<u> </u>
Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 520+ 12.1:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd 0.14 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 520+ 13.2:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd 0.29 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 520+ 14.2:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0.12 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.091
FS 520+ 15.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2195
Measured Length: Fwd 0 Aft 0.27	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 520+ 16.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22
Measured Length: Fwd 0.28 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088
FS 520+ 17.4:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2255
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088

Query		1101115 170 1015 1	100	1 0,	<u>c 0 01 30</u>
Field Inspections		Pre-Teardown Inspections		Fastener Param	eters
FS 540+ 4.7:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2195
Measured Length: Fwd	0.25 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.083
FS 540+ 5.7:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22
Measured Length: Fwd	0.17 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.09
FS 540+ 6.8:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.224
Measured Length: Fwd	0.19 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.087
FS 540+ 7.9:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	<b>LFEC</b>	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd	0 Aft 0.22	MOI	Rivetcheck	Flushness:	0
Inspector Comments:	•		C-scan	Grip:	0.092
FS 540+ 8.9:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
	-		-		
Measured Length: Fwd Inspector Comments:	0 Aft 0.18	MOI	Rivetcheck C-scan	Flushness: Grip:	0 0.094
-				7	
FS 540+ 10:Str-4R+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd	0 Aft 0.2	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.09

Query	1101115 170 1015 1	100	1 111	<u>, c &gt; 01 00</u>
Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 540+ 11:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0.15 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 540+ 12.1:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2195
Measured Length: Fwd 0.19 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 540+ 13.2:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.082
FS 540+ 14.2:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.224
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 540+ 15.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2225
Measured Length: Fwd 0.09 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 540+ 16.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.225
Measured Length: Fwd 0.12 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088

Query	D. T. J.		E	
Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 540+ 17.4:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2165
Measured Length: Fwd 0.13 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088
FS 540+ 17.4:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088
FS 560+ 4.7:Str-4L+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 560+ 3.6:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.095
FS 560+ 4.7:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2205
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 560+ 6.8:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2185
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.082

Query		1101115 170 1015 1	100	1 1151	7 11 01 00
Field Inspections		Pre-Teardown Inspections		Fastener Param	eters
FS 560+ 7.9:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.217
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.085
FS 560+ 8.9:Str-4R+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2165
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.086
FS 560+ 10:Str-4R+ 1:Lc	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.221
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.088
FS 560+ 11:Str-4R+ 1:Lc	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.086
FS 560+ 12.1:Str-4R+ 1:I	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.087
FS 560+ 13.2:Str-4R+ 1:	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd	0 Aft 0.21	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.085

Ouery Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 560+ 14.2:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
, ,		, ,		
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.091
FS 560+ 15.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 560+ 16.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 560+ 17.4:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088
FS 580+ 4.8:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 580+ 4.8:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2245
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086

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Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 580+ 6:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.218
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 580+ 7.1:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.219
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.082
FS 580+ 8.2:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 580+ 9.4:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 580+ 10.5:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088
FS 580+ 11.7:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086

Ouery Field Inspections	Pre-Teardown Inspections	Fastener Parameters
FS 580+ 12.8:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MF	FEC (Fwd) Head Dia: 0.1563
, ,		
LFEC MFEC(Aft)		FEC(Aft) Tail Dia: 0.2195
Measured Length: Fwd 0 Aft 0		petcheck Flushness: 0
Inspector Comments:	C-s	scan Grip: 0.087
FS 580+ 13.9:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MF	FEC (Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MF	FEC(Aft) Tail Dia: 0.22
Measured Length: Fwd 0 Aft 0	MOI Riv	vetcheck Flushness: 0
Inspector Comments:	C-s	scan Grip: 0.085
FS 580+ 15.1:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MF	FEC (Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MF	FEC(Aft) Tail Dia: 0.224
Measured Length: Fwd 0 Aft 0	MOI Riv	vetcheck Flushness: 0
Inspector Comments:	C-s	scan Grip: 0.091
FS 580+ 16.2:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MF	FEC (Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MF	FEC(Aft) Tail Dia: 0.2225
Measured Length: Fwd O Aft O	MOI Riv	vetcheck Flushness: 0
Inspector Comments:	C-s	scan Grip: 0.085
FS 580+ 17.3:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MF	FEC (Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MF	FEC(Aft) Tail Dia: 0.225
Measured Length: Fwd 0 Aft 0	MOI Riv	vetcheck Flushness: 0
Inspector Comments:	C-s	scan Grip: 0.087
FS 580+ 18.5:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MF	FEC (Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MF	FEC(Aft) Tail Dia: 0.217
Measured Length: Fwd 0 Aft 0	MOI Riv	vetcheck Flushness: 0
Inspector Comments:	C-s	scan Grip: 0.087

Query Field Inspections		Pre-Teardown Inspections		Fastener Paramo	eters
FS 600+ 11:Str-4L+ 1:Lowe	er Skin:Hole				
<b>DVI</b>	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
<b>LFEC</b>	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.084
FS 600+ 12.1:Str-4L+ 1:Lo	wer Skin:Hole				
<b>DVI</b>	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
<b>LFEC</b>	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
	0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:	O Aji	MOI	C-scan	Grip:	0.094
FS 600+ 14.2:Str-4L+ 1:Lo	wer Skin:Hole				
<b>DVI</b>	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
<b>LFEC</b>	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.089
FS 600+ 16.3:Str-4L+ 1:Lo	wer Skin:Hole				
<b>DVI</b>	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
<b>LFEC</b>	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2225
Measured Length: Fwd	0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.088
FS 600+ 17.4:Str-4L+ 1:Lo	wer Skin:Hole				
<b>DVI</b>	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
<b>LFEC</b>	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.225
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.088
FS 600+ 8.9:Str-4R- 1:Low	er Skin:Hole				
<b>DVI</b>	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
<b>LFEC</b>	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2205
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.082

Ouery Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 600+ 10:Str-4R+ 1:Lower Skin:Hole	•			
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2225
•		-		
Measured Length: Fwd 0 Aft 0  Inspector Comments:	MOI	Rivetcheck C-scan	Flushness: Grip:	0 0.09
Inspector Comments.		C-scun	Grip.	0.03
FS 600+ 11:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2185
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 600+ 11:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.225
Measured Length: Fwd 0.31 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.084
FS 600+ 12.1:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.217
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.084
FS 600+ 12.1:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd 0.25 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.094
FS 600+ 13.2:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd 0.28 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.093

Ouery Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 600+ 14.2:Str-4R+ 1:Lower Skin:Hole	•			
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC .	MFEC(Aft)	Tail Dia:	0.2215
		-		
Measured Length: Fwd 0 Aft 0  Inspector Comments:	MOI	Rivetcheck C-scan	Flushness: Grip:	0 0.089
Inspector Comments.		C-scan	Grip.	0.003
FS 600+ 15.3:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.09
FS 600+ 15.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2195
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 600+ 17.4:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.224
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 620+ 5.7:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.223
Measured Length: Fwd 0.13 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.089
FS 620+ 6.8:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd 0.12 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087

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Field Inspections		Pre-Teardown Inspections		Fastener Paran	neters
FS 620+ 7.9:Str-4R+ 1:L0	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd	0.12 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.092
FS 620+ 8.9:Str-4R- 1:Lc	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2255
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.085
FS 620+ 8.9:Str-4R+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd	0.15 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.091
FS 620+ 10:Str-4R- 1:Lo	wer Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.091
FS 620+ 10:Str-4R+ 1:Lc	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2195
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.09
FS 620+ 11:Str-4R- 1:Lo	wer Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2205
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.092

Ouery Field Inspections	Pre-Teardown Inspections	Fastener Parameters
FS 620+ 11:Str-4R+ 1:Lower Skin:Hole	Tre Teardown Inspections	1 usionor 1 urumotors
DVI MFEC (Fwd)	DVI MFEC (Fwo	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.22
Measured Length: Fwd 0.19 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	<i>Grip</i> : 0.084
FS 620+ 12.1:Str-4R- 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fwa	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.22
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	Grip: 0.084
FS 620+ 13.2:Str-4R- 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fwa	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.2185
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	<i>Grip:</i> 0.092
FS 620+ 14.2:Str-4R- 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fwa	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.217
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	Grip: 0.09
FS 620+ 15.3:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fwa	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.225
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	<i>Grip</i> : 0.089
FS 620+ 16.3:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fwa	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.2255
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	Grip: 0.089

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Field Inspections		Pre-Teardown Inspections		Fastener Paran	neters
FS 640+ 5.7:Str-4L+ 1:L0	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2165
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.09
FS 640+ 6.8:Str-4L+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.221
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.087
FS 640+ 7.9:Str-4L+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.092
FS 640+ 10:Str-4L+ 1:Lo	wer Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.09
FS 640+ 4.7:Str-4R+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.086
FS 640+ 8.9:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2195
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	o
Inspector Comments:			C-scan	Grip:	0.094

Query Field Inspections	Pre-Te	eardown Inspections	1	Fastener Parame	ters
FS 640+ 10:Str-4R+ 1:Lower \$					
	EC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
	,		, ,		
	EC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22
Measured Length: Fwd 0	Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.09
FS 640+ 11:Str-4R+ 1:Lower S	Skin:Hole				
DVI MF.	EC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MF.	EC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.224
Measured Length: Fwd 0	Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.086
FS 640+ 12.1:Str-4R+ 1:Lowe	r Skin:Hole				
DVI MF.	EC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MF	EC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2225
Measured Length: Fwd 0	Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.087
FS 640+ 17.4:Str-4R+ 1:Lowe	r Skin:Hole				
DVI MF.	EC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MF.	EC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2165
Measured Length: Fwd 0	Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.088
FS 660+ 3.6:Str-4R- 1:Lower S	Skin:Hole				
DVI MF.	EC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MF.	EC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2255
Measured Length: Fwd 0	Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.088
FS 660+ 3.6:Str-4R+ 1:Lower	Skin:Hole				
DVI MF.	EC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MF.	EC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22
Measured Length: Fwd 0	Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.095

Ouery Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 660+ 5.7:Str-4R- 1:Lower Skin:Hole			1 4000000 1 400000	
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
, ,		, ,		
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2205
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 660+ 7.9:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2185
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.08
FS 660+ 10:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2205
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.09
FS 660+ 11:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.221
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 660+ 11:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 660+ 12.1:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086

Ouery Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 660+ 15.3:Str-4R+ 1:Lower Skin:Hole			1 4000000 1 400000	
	DW	MEEC (E.J.)	H1D:	0.1563
, ,	DVI	MFEC (Fwd)	Head Dia:	
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.221
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 660+ 16.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088
FS 680+ 2.6:Str-4L+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2165
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 680+ 3.6:Str-4L+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.221
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088
FS 680+ 4.7:Str-4L+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.083
FS 680+ 5.7:Str-4L+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.09

Query Field Inspections	Pre-Teardown Inspections	Fastener Parameters
FS 680+ 6.8:Str-4L+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC	C (Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC	C(Aft) Tail Dia: 0.2245
Measured Length: Fwd 0 Aft 0	MOI Rivetch	
Inspector Comments:	C-scar	n Grip: 0.087
FS 680+ 8.9:Str-4L+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC	(Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC	C(Aft) Tail Dia: 0.2235
Measured Length: Fwd 0 Aft 0	MOI Rivetc	heck Flushness: 0
Inspector Comments:	C-scar	o.094
FS 680+ 2.6:Str-4R- 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC	C (Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC	C(Aft) Tail Dia: 0.2235
Measured Length: Fwd 0 Aft 0	MOI Rivetch	heck Flushness: 0
Inspector Comments:	C-scar	o.088
FS 680+ 6.8:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC	(Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC	C(Aft) Tail Dia: 0.2255
Measured Length: Fwd 0 Aft 0	MOI Rivetc	heck Flushness: 0
Inspector Comments:	C-scar	o.087
FS 680+ 10:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC	(Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC	C(Aft) Tail Dia: 0.22
Measured Length: Fwd 0 Aft 0	MOI Rivetc	heck Flushness: 0
Inspector Comments:	C-scar	o.09
FS 680+ 14.2:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC	C (Fwd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC	C(Aft) Tail Dia: 0.221
Measured Length: Fwd 0 Aft 0	MOI Rivetch	heck Flushness: 0
Inspector Comments:	C-scar	o.085

nspection Duery		From FS 178 to FS	1183	Pag	e 25 of 38
Field Inspections		Pre-Teardown Inspections		Fastener Paran	neters
FS 700+ 6:Str-4R- 1:Low	ver Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.087
FS 700+ 7.9:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.218
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.085
FS 700+ 9.4:Str-4R- 1:L0	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
<b>LFEC</b>	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2185
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.083
FS 700+ 8.9:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.086
FS 700+ 10.5:Str-4R- 1:l	_ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.217
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.084
FS 700+ 10:Str-4R+ 1:Lc	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.088

Ouery Field Inspections	Pre-Teardown Inspections		Fastener Param	otors
FS 700+ 11:Str-4R+ 1:Lower Skin:Hole	Tre-reardown inspections		rustener rurum	eters
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 700+ 12.1:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 700+ 13.2:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2195
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 700+ 16.2:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2225
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.089
FS 700+ 15.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.224
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 700+ 16.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2225
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087

Ouery Field Inspections	Pre-Teardown Inspections		Fastener Parame	otore
-	Tre-Teuruown Inspections		rusienei i urume	iers
FS 720+ 3.7:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.221
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:	•	C-scan	Grip:	0.092
FS 720+ 3.7:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.095
FS 720+ 4.8:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 720+ 6:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2235
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 720+ 6:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 720+ 7.1:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2245
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.082

Query Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 720+ 7.1:Str-4R+ 1:Lower Skin:Hole	•			
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	<b>LFEC</b>	MFEC(Aft)	Tail Dia:	0.2195
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:	MOI	C-scan	Grip:	0.082
			•	
FS 720+ 8.2:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.218
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 720+ 8.2:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 720+ 9.4:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.219
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.083
FS 720+ 9.4:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.224
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 720+ 10.5:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2225
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088

Query	1101115 170 1015 1	100	1 1150	22 01 00
Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 720+ 11.7:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.221
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 720+ 11.7:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.225
Measured Length: Fwd 0.16 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 720+ 12.8:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2255
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 720+ 13.9:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2265
Measured Length: Fwd 0.2 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 720+ 15.1:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.222
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 720+ 15.1:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2205
Measured Length: Fwd 0.22 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.091

Query		1101115 170 1015 1	100	- I ugo	20 01 00
Field Inspections		Pre-Teardown Inspections		Fastener Paramo	eters
FS 720+ 16.2:Str-4R- 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2215
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.089
FS 720+ 16.2:Str-4R+ 1:L	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.22
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.085
FS 720+ 17.3:Str-4R- 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2195
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.095
FS 720+ 17.3:Str-4R+ 1:L	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2185
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.087
FS 720+ 18.5:Str-4R+ 1:L	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2185
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.087
FS 720A+ 3.6:Str-4R+ 1:	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2845
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.092

Query		1101115 170 1015 1	100	1 4 5	01 01 00
Field Inspections		Pre-Teardown Inspections		Fastener Parame	eters
FS 720A+ 4.7:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.29
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.086
FS 720A+ 5.7:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2895
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.089
FS 720A+ 6.8:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.291
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.087
FS 720A+ 7.9:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2875
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.092
FS 720A+ 8.9:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.286
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.091
FS 720A+ 10:Str-4R+ 1:Lc	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2885
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.09

Ouery Field Inspections	Pre-Teardown Inspections	Fastener Parameters
FS 720A+ 11:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fw	d) Head Dia: <b>0.1563</b>
, ,		.,
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.288
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	Grip: 0.084
FS 720B+ 2.6:Str-4R+ 0:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fw	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.294
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	<i>Grip:</i> 0.082
FS 720B+ 2.6:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fw	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.291
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	<i>Grip:</i> 0.087
FS 720B+ 3.6:Str-4R- 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fw	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	<i>Tail Dia:</i> 0.276
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	<i>Grip:</i> 0.088
FS 720B+ 3.6:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fw	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.2925
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	<i>Grip:</i> 0.092
FS 720B+ 4.7:Str-4R- 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fw	d) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft)	Tail Dia: 0.2755
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	Grip: 0.088

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Ouery Field Inspections	Pre-Teardown Inspections		Fastener Param	eters
FS 720B+ 4.7:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.29
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 720B+ 5.7:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2895
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.089
FS 720B+ 6.8:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.291
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 720B+ 7.9:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2915
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.092
FS 720B+ 8.9:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.275
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 720B+ 8.9:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.29
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.091

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Field Inspections		Pre-Teardown Inspections		Fastener Param	eters
FS 720B+ 10:Str-4R+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
<b>LFEC</b>	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2885
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.09
FS 720B+ 11:Str-4R+ 1:Lo	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
<b>LFEC</b>	MFEC(Aft)	<b>LFEC</b>	MFEC(Aft)	Tail Dia:	0.288
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.084
FS 720B+ 12.1:Str-4R+ 1:	:Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2895
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.094
FS 720B+ 13.2:Str-4R+ 1:	:Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2915
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.093
FS 720B+ 14.2:Str-4R+ 1:	:Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.289
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.089
FS 720B+ 15.3:Str-4R+ 1:	:Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.289
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.089

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Field Inspections	Pre-Teardown Inspections	Fastener Parameters
FS 720B+ 16.3:Str-4R+ 1:Lower Skin:Hole	)	
DVI MFEC (Fwd)	DVI MFEC (F	wd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Aft	t) Tail Dia: 0.289
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	Grip: 0.089
FS 720C+ 3.6:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (F	wd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Afi	t) Tail Dia: 0.2745
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	Grip: 0.095
FS 720C+ 7.9:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (F)	wd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Afi	t) Tail Dia: 0.2875
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	k Flushness: 0
Inspector Comments:	C-scan	Grip: 0.092
FS 720C+ 8.9:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (Fr	wd) Head Dia: <b>0.1563</b>
LFEC MFEC(Aft)	LFEC MFEC(Afi	
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	
Inspector Comments:	C-scan	Grip: 0.094
FS 720C+ 10:Str-4R- 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (F	
LFEC MFEC(Aft)	LFEC MFEC(Afi	t) Tail Dia: 0.2855
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	
Inspector Comments:	C-scan	<i>Grip:</i> 0.085
FS 720C+ 10:Str-4R+ 1:Lower Skin:Hole		
DVI MFEC (Fwd)	DVI MFEC (F)	wd) Head Dia: 0.1563
LFEC MFEC(Aft)	LFEC MFEC(Afi	t) Tail Dia: 0.2885
Measured Length: Fwd 0 Aft 0	MOI Rivetcheck	Flushness: 0
Inspector Comments:	C-scan	<i>Grip:</i> 0.09

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Field Inspections	Pre-Teardown Inspections		r usiener Param	eters
FS 720C+ 11:Str-4R- 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2875
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.086
FS 720C+ 12.1:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2895
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.087
FS 720C+ 13.2:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2835
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 720C+ 15.3:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.283
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.085
FS 720C+ 17.4:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1563
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.287
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.088
FS 720D+ 7.9:Str-4R+ 1:Lower Skin:Hole				
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1875
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2875
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:		C-scan	Grip:	0.092

Query Field Inspections		Pre-Teardown Inspections		Fastener Parameters	
FS 720D+ 8.9:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1875
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.286
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:	v		C-scan	Grip:	0.094
FS 720D+ 10:Str-4R+ 1:Lc	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1875
<b>LFEC</b>	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2885
Measured Length: Fwd	0 Aft 0.18	MOI	Rivetcheck	Flushness:	0
Inspector Comments:	v		C-scan	Grip:	0.09
FS 720D+ 12.1:Str-4R+ 1:	Lower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1875
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2895
Measured Length: Fwd (	0.11 Aft 0	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.087
FS 720E+ 7.9:Str-4R+ 1:L	ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1875
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2845
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.092
FS 950C+ 11.7:Str-4L- 1:L	_ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1875
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.271
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.086
FS 950D+ 11.7:Str-4L- 1:L	_ower Skin:Hole				
DVI	MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1875
LFEC	MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.296
Measured Length: Fwd	O Aft O	MOI	Rivetcheck	Flushness:	0
Inspector Comments:			C-scan	Grip:	0.086

Ouery Field Inspections	Pre-Teardown Inspections		Fastener Parameters						
FS 950D+ 11.7:Str-4R- 1:Lower Skin:Hole									
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1875					
LFEC MFEC(Aft)	<i>LFEC</i>	MFEC(Aft)	Tail Dia:	0.296					
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0					
Inspector Comments:	WOI	C-scan	Grip:	0.086					
			•						
FS 950E+ 11.7:Str-4L- 1:Lower Skin:Hole									
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1875					
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.296					
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0					
Inspector Comments:		C-scan	Grip:	0.086					
FS 950E+ 11.7:Str-4R- 1:Lower Skin:Hole									
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.1875					
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.294					
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0					
Inspector Comments:		C-scan	Grip:	0.086					
FS 950F+ 8.2:Str-4L- 1:Lower Skin:Hole									
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.156					
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.2975					
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0					
Inspector Comments:		C-scan	Grip:	0.083					
FS 950F+ 11.7:Str-4L- 1:Lower Skin:Hole									
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.156					
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.295					
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0					
Inspector Comments:		C-scan	Grip:	0.076					
FS 950F+ 11.7:Str-4R- 1:Lower Skin:Hole									
DVI MFEC (Fwd)	DVI	MFEC (Fwd)	Head Dia:	0.156					
LFEC MFEC(Aft)	LFEC	MFEC(Aft)	Tail Dia:	0.295					
Measured Length: Fwd 0 Aft 0	MOI	Rivetcheck	Flushness:	0					
Inspector Comments:		C-scan	Grip:	0.076					